

BEFORE THE
PUBLIC SERVICE COMMISSION OF WISCONSIN

Application of Wisconsin Electric Power Company,
Wisconsin Gas LLC and Wisconsin Public Service
Corporation for Declaratory Ruling and Approval
Regarding Long-Term Natural Gas Storage and
Transportation Arrangements

Docket No. 5-DR-____

APPLICATION

Wisconsin Electric Power Company (“Wisconsin Electric”), Wisconsin Gas LLC (“Wisconsin Gas”), and Wisconsin Public Service Corporation (“WPS”), as natural gas public utilities (each a “Gas Utility” and collectively the “Gas Utilities”), propose to lock in long-term access akin to ownership for about one-third of their natural gas storage and associated transportation needs, reduce their reliance on shorter-term leases and a dominant provider of these critical resources, and deliver about \$200 million in net present value (“NPV”) savings to their 1.4 million gas customers in Wisconsin.

This innovative proposal embraces and leverages the country’s shift to natural gas as a primary source of energy for multiple uses. With the demand for natural gas increasing for electric generation, exports and liquefied natural gas (“LNG”) production, the demand and cost of natural gas storage and interstate transportation are expected to rise in the near future. These conditions make now the time to obtain a strategic long-term commitment for these critical resources.

A unique set of circumstances -- the availability of a large underground storage facility at the same time transportation capacity is available to utilize that facility at a very low cost -- provide WEC Energy Group, Inc. (“WEC”) and its Gas Utilities with a unique opportunity to

acquire these resources and devote them to serve Wisconsin end-use gas customers. The Gas Utilities plan to take advantage of this opportunity for their customers through a series of transactions by which:

- WEC, the Gas Utilities’ corporate parent, will acquire 100% of the equity of Bluewater Natural Gas Holding, LLC (“BGH”), which owns underground natural gas storage facilities in southeastern Michigan.¹
- The Gas Utilities currently “lease” more than three-quarters of the Bluewater facility’s total working gas capacity under shorter-term (one- to five-year) interstate storage service agreements with BGH, which operates the facility.² As a result of this transaction, the Gas Utilities will no longer be renting or “leasing” 100% of their future gas storage needs.
- After WEC’s acquisition of BGH, the Gas Utilities will enter into long-term (sixty-year) storage service agreements that will convert their leased storage capacity to long-term access on terms and conditions virtually identical to ownership. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹ BGH’s wholly-owned subsidiaries, Bluewater Gas Storage LLC and BGS Kimball Gas Storage LLC, own the underground natural gas storage facilities. For the sake of simplicity, all three entities are referred to in this Application as “BGH.”

² The Gas Utilities purchase storage service from BGH in specified quantities and for specified contract periods under its market-based tariff filed with the Federal Energy Regulatory Commission. The Gas Utilities and the PSCW traditionally refer to these transactions as “leases,” as the contracted service effectively gives the customer the right to use a specified quantity of storage capacity. However, contracted storage service does not provide the customer with any property rights in the storage facility.

- The Gas Utilities will enter into interstate gas transportation contracts with Vector Pipeline L.P. (“Vector”) to transport gas between the Bluewater facility and the Guardian Pipeline LLC pipeline (“Guardian”) to which each of the Gas Utilities is connected.

These transactions will diversify the Gas Utilities’ gas storage and transportation portfolios, reserve a substantial quantity of underground storage capacity for their Wisconsin end-use retail customers, and provide opportunities for the Gas Utilities to enhance reliability and reduce cost in ways that are not available under the shorter-term storage leases the Gas Utilities must currently rely upon for storage service. Indeed, as shown in Table 1, the Gas Utilities estimate that their long-term access to the Bluewater facility’s storage capacity will reduce their costs by about \$200 million NPV over the next sixty years, a reduction of about 30% in their storage and transportation costs for that portion of their portfolio.

Table 1
(\$\$\$ in millions)

	WPS	Wisconsin Gas	Wisconsin Electric	Total
Status Quo				
Bluewater Base Case				
Savings				
Savings %				

Relief Requested

Given the innovative nature of the proposed transactions, the Gas Utilities seek the Commission’s concurrence in the form of a declaratory ruling under Wis. Stat. § 227.42 finding that it is reasonable and prudent for the Gas Utilities to enter into the long term storage service

agreements and related interstate gas transportation contracts and to recover their allocated portions of the full cost of acquiring the Bluewater facility (the purchase price of \$225 million plus \$5 million in transaction costs) and all of the reasonable and prudent expenses of operating and maintaining the facility through their respective purchase gas adjustment (“PGA”) clauses based upon annual demand requirements. The Gas Utilities further request approval under Wis. Stat. § 196.52 for amendments to the WEC Affiliated Interest Agreement (“WEC AIA”) to enable WEC’s service company, WEC Business Services LLC (“WBS”) and other WEC subsidiaries to provide a full range of services to support the Bluewater facility

This opportunity to secure long-term access to gas storage and the associated transportation capacity on favorable terms is available for a limited period. [REDACTED]

Accordingly, the Gas Utilities respectfully request that the Commission issue the requested declaration and approval within 90 days of this filing, or May 3, 2017.

Introduction

The natural gas market is undergoing a fundamental shift created by the abundant natural gas resources our country tapped into through advances in technology over the past decade. Natural gas production from shale, for example, now accounts for roughly a third of the domestic natural gas produced in the United States. WEC believes the new market environment for natural gas in the United States also provides a real opportunity for its local gas distribution companies to better optimize their resources and plan for the future in the area of underground natural storage services and the associated interstate transportation.

Underground storage of natural gas is a very efficient way for local gas distribution companies to balance the discrepancies between natural gas supply and market demand

throughout the year. Gas storage acts as a balancing and hedging tool that gas utilities rely upon to minimize the cost of gas service for their customers.

Natural gas is stored underground primarily in three types of reservoir types—depleted oil and gas fields, aquifers and salt beds. Unfortunately, Wisconsin is one of the few states in the upper Midwest to have none of these types of reservoirs. This puts Wisconsin gas utilities at a distinct disadvantage among utilities in the Upper Midwest by being entirely dependent on out-of-state providers for all of their gas storage capacity needs.

The Gas Utilities propose to take advantage of current market conditions to secure access to an underground gas storage facility that will lock in cost savings and cost certainty for their customers for decades to come. This opportunity is available now as a result of:

- Availability of a substantial underground storage asset in Michigan that can be used to meet the long term storage needs of the Gas Utilities and their customers.
- Availability of low cost, long term transportation capacity that provides access to storage capacity in Michigan.

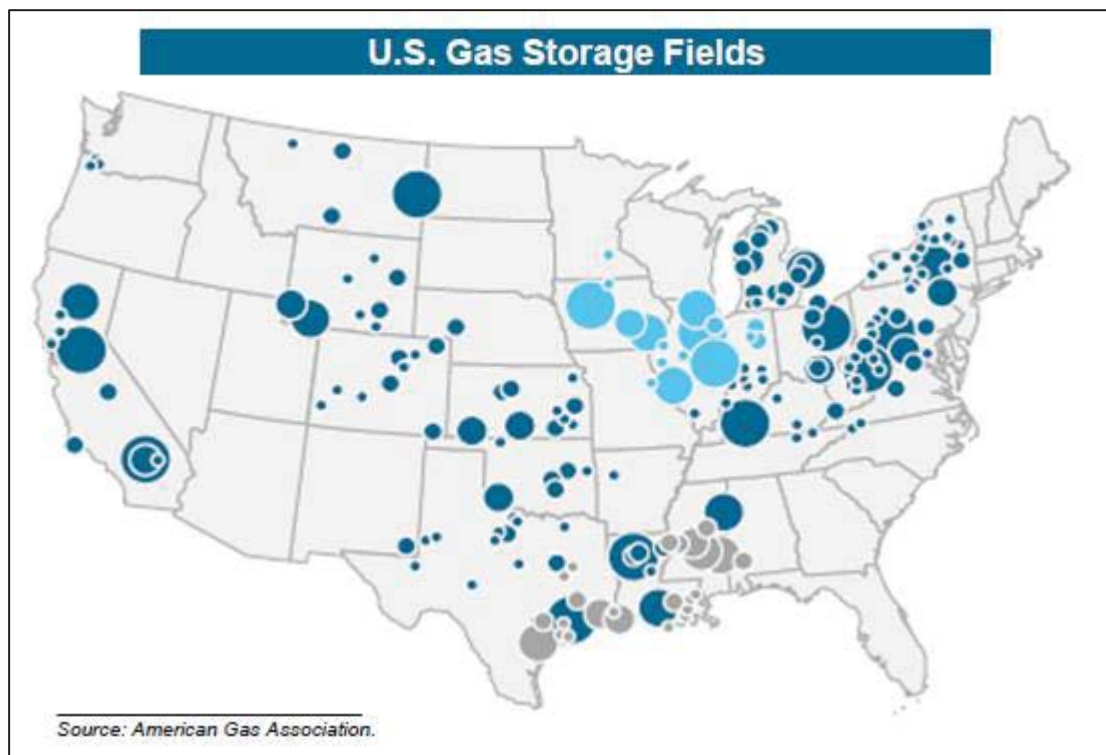
Acquiring long-term access to the Bluewater storage facility now is a unique opportunity for the Gas Utilities and their customers because the demand for and cost of natural gas storage and transportation services are expected to rise in the future with the increased use of natural gas for electric generation and exports. Proceeding now will deliver several benefits to the Gas Utilities' customers:

- Long-term access to underground storage capacity at substantially lower cost compared to shorter term leases.
- Certainty of long-term access to storage capacity at a time of uncertainty as to both availability and cost.

- Increased flexibility akin to ownership to inject into, and withdraw gas out of, storage in response to market conditions, compared to the typical limits in shorter-term storage service agreements.
- Ability to lock in available low-cost transportation on a long-term basis to deliver gas to and from the acquired storage capacity.
- Diversification of storage and transportation portfolios and reduced reliance on ANR Pipeline Company (“ANR”).

Background

Natural gas storage is a crucial component of the reliable and low-cost natural gas service that the Gas Utilities provide their customers. Wisconsin’s geology is not suitable for the development of underground natural gas storage facilities because the state lacks large underground cavities capable of storing natural gas under pressure (e.g., depleted oil or gas reservoirs, aquifers or salt caverns). As shown in Figure 1, Wisconsin is the only upper Midwest state that lacks gas storage capacity.

Figure 1

As a result, the Gas Utilities' access to natural gas storage is limited to out-of-state, third-party-controlled resources that are available through interstate gas pipeline interconnections. The Gas Utilities currently rely primarily on TransCanada's ANR tariffed services for a significant portion of their storage and associated transportation needs.

The Gas Utilities use storage to provide reliable and reasonably priced natural gas service to their customers. The ability to transport gas for injection into storage, later to be withdrawn for delivery to their local distribution systems, serves a number of important roles for natural gas utilities:

- Storage is a highly flexible source of firm gas supply used to meet the peak day demand of winter (November-March) and spring shoulder month (April-May)

seasonal and peak demand system requirements. Approximately 20% of all natural gas consumed during the winter is supplied by underground storage.³

- Changes in natural gas usage by customers in response to weather, production schedules and other drivers require the gas utility to “balance” the demands for natural gas on its system with its supplies of natural gas by injecting or withdrawing gas from storage and using transportation services to move the gas to and from the gas utility’s system. Storage enables a gas utility to balance its gas supplies with the demand of its end-use sales customers and to provide balancing services to its transport customers.
- Storage serves as a hedge against natural gas price volatility, helping protect the gas utility and its customers against spikes in the prices of natural gas during periods of peak demand.
- Market-area storage reduces the need for and cost of “long haul” pipeline transportation capacity from distant producing regions to the gas utility’s city-gate, to meet peak requirements.
- Market-area storage also diversifies supplies and enhances supply reliability during peak demand periods.

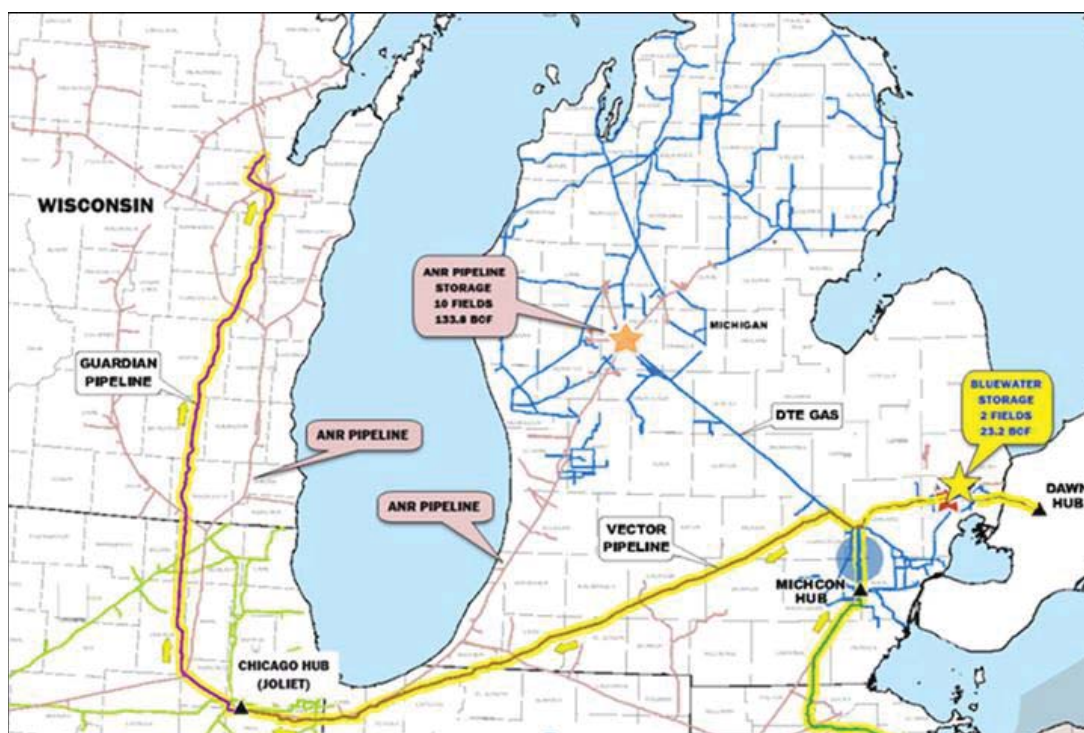
A more detailed discussion of the role of storage and associated transportation, how it works, and the advantages over other types of natural gas supply is provided in Attachment 1.

Currently, the Gas Utilities contract for about [REDACTED] Bcf of underground natural gas storage capacity and storage-related services and spend about \$ [REDACTED] million annually for natural gas storage services through a series of short-term and intermediate-term arrangements. As

³ American Petroleum Inst. & American Gas Assoc., *Supporting the American Way of Life, The Importance of Natural Gas Storage* (2016).

noted above, the Gas Utilities are dependent on out-of-state providers for natural gas storage and the pipeline capacity required to transport the natural gas to and from storage. As a practical matter, as shown in Figure 2, this has limited the Gas Utilities' access to natural gas storage to (1) ANR's natural gas storage fields in Michigan connected to the ANR pipeline system and (2) to a lesser extent, other storage fields in Michigan connected to Vector and Guardian.

Figure 2



As a result, the Gas Utilities currently purchase nearly half of their natural gas storage and associated transportation from TransCanada's ANR, a single, dominant supplier that owns both the storage facilities and the interstate pipeline. Figure 3 shows the Gas Utilities' current sources of natural gas storage capacity:

Figure 3

In summary, the Gas Utilities have access to relatively few sources of natural gas storage, all of them out of state. The Gas Utilities' existing storage portfolios are comprised of industry standard shorter-term (one to five years) storage service agreements, with pricing and availability subject to change as authorized by tariff and/or contract. The Gas Utilities are currently heavily dependent on ANR's cost-based bundled storage and transportation services, the bulk of which are at or near ANR's maximum tariff rate. Thus, the Gas Utilities and their customers are exposed to risks associated with the continued availability and price of natural gas storage and the associated transportation.

An Opportune Time for the Gas Utilities to Diversify Natural Gas Storage and Transportation Portfolios

The abundance of natural gas in our country has resulted in low and stable natural gas prices for a number of years. This has been good news for the 1.4 million Wisconsin homes, farms and businesses served by the Gas Utilities. While this abundance has focused greater

regulatory attention on expanding and updating the nation's interstate gas pipeline delivery system, WEC believes now is the time to take advantage of low-priced natural gas storage and transportation capacity and lock in that value for the Gas Utilities' customers for decades to come. The opportunity to acquire long-term control of natural gas storage and the associated transportation is particularly strategic now for two reasons: (1) the expected increase in the demand for and price of natural gas storage and (2) the Gas Utilities' limited alternative sources of storage and transportation capacity.

Increasing Demand for Gas Storage

The fundamental shift in the United States toward natural gas will continue to shape the natural gas marketplace. In particular, the increased use of natural gas for electric generation and export is expected to increase the seasonal variability in natural gas prices, which in turn will increase the demand for and price of natural gas storage capacity. Storage becomes more valuable with increased seasonal price variations because market participants can use storage to take advantage of the pricing differences.

Natural gas demand in the United States is expected to increase by 13 Bcf per day ("Bcf/d") over the next five years. With seasonal variability in natural gas prices, the demand for and market value of seasonal storage capacity in market centers such as Chicago is expected to rise.⁴ In other words, these factors will increase the demand for natural gas storage, and thus place upward pressure on the prices at which the Gas Utilities can procure or retain storage capacity in the future.

⁴ ICF International. *Impacts of Changing Supply & Demand Dynamics on LDCs and End-Users*. September 13, 2016.

Another factor driving greater future demand for gas storage is the growth in the use of natural gas for electric generation. This is occurring as the dispatch of existing gas-fired generation rises, older coal-fired generation is retired, and new gas-fired generation is constructed. Because of the varying intra-day demands of the electric grid and the ability of gas-fired generation to ramp up and down relatively quickly, many electric utilities rely on natural gas storage to help balance their daily fuel needs for gas-fired generation. For example, both Wisconsin Electric and Wisconsin Power and Light Company (“WPL”) have secured firm natural gas storage for their Port Washington and Riverside combined cycle facilities, respectively.

In 2016, for the first time ever, natural gas became the most-used fuel for electric generation in the United States.⁵ EIA expects natural gas-fired electric generation to increase another 26% by 2030 and 44% by 2044.⁶ In the Great Lakes region alone, the amount of natural gas used for electric generation is forecasted to increase by 1.2 Bcf/day or 68% by 2030.⁷ The overall demand for natural gas in the Great Lakes region is expected to increase by 2.8 Bcf/day over that same period.⁸ Currently there are at least 2,500 MW of new combined cycle and combustion turbine facilities in the MISO queue and likely to be on-line in the Midwest within the next four years.⁹ This does not include the 1,000 MW of new gas generation recently

⁵ Owen Comstock, *Natural-gas fired generation expected to reach record level in 2016* (EIA Today in Energy, July 14, 2016).

⁶ EIA 2016 Energy Outlook.

⁷ DTE Energy, *NEXUS Gas Transmission Project*, LDC Gas Forum Toronto (Nov. 11, 2015)

⁸ *Id.*

⁹ This is based on the Gas Utilities’ analysis of the MISO queue as of the filing date of this Application.

announced by DTE to be built in Michigan, the location of most of the storage capacity the Gas Utilities rely on to support demand in the state of Wisconsin.¹⁰

The Amount of Gas Storage Capacity Is Finite

As the demand for natural gas storage rises, however, the amount of storage capacity available in the market, particularly in the Midwest, is expected to remain constant. There has been no expansion of storage in the MISO Midwest Region in the last five years and none is underway now.¹¹ One analyst has highlighted the “lack of storage capacity expansions as a long-run concern,” and observed that this provides “more ingredients for higher volatility [in natural gas prices].”¹²

In addition to increasing demand, the cost of natural gas storage is expected to rise significantly due to the need for large investments for asset modernization and increasingly stringent environmental and safety requirements. Storage providers are spending hundreds of millions of dollars on these types of improvements.¹³ Due to such requirements, the Gas Utilities expect ANR’s storage rates to increase significantly over the next three decades. As shown in

¹⁰ *DTE Energy to build new electric generation capacity*, News Release, Sept. 29, 2016, <http://newsroom.dteenergy.com/2016-09-29-DTE-Energy-to-build-new-electric-generation-capacity#sthash.K7ohD3O7.dpbs>

¹¹ Gregory L. Peters, et al., *Phase III: Natural Gas-Fired Electric Power Generation Infrastructure Analysis* (prepared for Midcontinent Independent Transmission System Operator), at p. 112 (Dec. 1, 2013).

¹² Macquarie Research, *US Natural Gas: Better Days Ahead, Maybe?* (Sept. 2016).

¹³ FERC recently approved a settlement between Columbia Gas Transmission, an owner of significant market-area storage in Appalachia, and its shippers regarding the pipeline’s requirement to invest \$125 million related to its storage assets over the next five years. The Columbia settlement includes a projected total capital cost of \$125 million for storage field deliverability restoration. Columbia’s deliverability restoration program is focused on system safety, reliability, and performance, as well as work that will be required to meet emerging state and federal regulations (e.g., air quality). Columbia is also committed to annual capital expenditures on bare steel storage projects of up to \$20 million annually as it addresses the need to replace segments of its storage field pipeline networks. *Columbia Gas Transmission, LLC*, 154 FERC ¶ 61,208 (2016).

Table 2, ANR's existing storage assets are on average forty-six years old, and will likely require significant investment to meet asset modernization and compliance requirements:

Table 2

Owner	Working	Base	Total	Ave Age	Base/Total Ratio	# of Wells
	Bcf	Bcf	Bcf	Years		
ANR Pipeline	133.8	119.0	252.8	52	47.1%	927
ANR Storage	55.8	8.0	63.8	36	12.5%	34
ANR Eaton	13.5	2.7	16.2	26	16.7%	14
Total	203.1	129.7	332.8	46	39.0%	975

In its most recent rate case, ANR requested an increase of over 90% to its transportation service rates and settled for an increase of 35%.¹⁴ As described in ANR's rate case filing, ANR's increase in rates was largely the result of asset modernization associated with its transportation facilities. In contrast, the rate case did not include an adjustment to storage rates nor did it include any incremental costs for the modernization of ANR's storage assets. With such modernization needed, ANR's customers will almost certainly see requests for storage-related rate increases in the future.

For all of these reasons, the Gas Utilities concluded that it would be prudent to obtain more direct control of natural gas storage and associated transportation on a long-term basis. The Gas Utilities have access to alternatives to ANR's tariffed storage and transportation services by virtue of their interconnections with the Guardian pipeline, which was constructed in eastern Wisconsin in the 2000s as an alternative to ANR. The Commission approved the Gas Utilities' construction of laterals to connect with Guardian as a second source of pipeline capacity for the purposes of meeting growing demand, enhancing reliability, increasing the utilities' diversity of suppliers of pipeline-related services, and establishing competition for

¹⁴ ANR Pipeline Co., 157 FERC ¶ 61,205 (2016) (letter order approving settlement).

interstate pipeline and third-party services.¹⁵ Today, the Gas Utilities have over 90% of Guardian's firm transportation capacity under contract, making it a critical long-term component of the Gas Utilities' resource portfolio.

Through Guardian, the Gas Utilities have access to the Vector pipeline system, which in turn connects to a number of underground natural gas storage facilities in eastern Michigan. The current and expected pricing of the transportation capacity needed to inject and withdraw natural gas in and out of storage in Michigan via the Vector and Guardian pipelines are significantly lower than ANR's tariffed transportation service.

In summary, while the Gas Utilities' customers have recently benefited from low natural gas prices and low natural gas storage prices, these conditions are beginning to change. The value of natural gas storage is starting to increase with the increased use of natural gas as fuel for electric generation and export, and the cost of natural gas storage is rising with increased capital investment requirements. Meanwhile, the Gas Utilities have a unique opportunity to lock in a significant portion of their storage and associated transmission requirements at significant savings to their customers. All of these factors make it an opportune time for the Gas Utilities to secure a significant portion of their natural gas storage requirements for the long term.

The Bluewater Natural Gas Storage Facility

The Bluewater underground natural gas storage facility is a relatively new facility located in southeastern Michigan. The facility, which uses depleted underground oil fields to store gas,¹⁶

¹⁵ See Preliminary Decision, *Wisconsin Gas Co.*, Docket 6650-CG-194 (Feb. 23, 2001); Final Decision, *Wisconsin Public Service Corp.*, Docket 6690-CG-160 (June 15, 2007); Final Decision, *Wisconsin Gas Co. & Wisconsin Elec. Power Co.*, Docket 5-CG-103 (June 15, 2007); Final Decision, *Wisconsin Gas Co.*, Docket 6650-CG-220 (June 15, 2007).

¹⁶ According to EIA, in 2014 Michigan ranked 18th among the states in each of crude oil and natural gas production. <https://www.eia.gov/state/rankings/#/series/46>; <https://www.eia.gov/state/rankings/#/series/47>.

commenced gas storage operations in 2005. The facility currently has 33.5 Bcf total storage capacity, of which 23.2 Bcf is “working gas” capacity.¹⁷

The Gas Utilities are well familiar with this facility, as they currently lease about three-quarters of its working gas capacity.¹⁸ Due diligence confirms that the facilities reservoirs and equipment are in good working order and have been well maintained.

Compared to older underground gas storage facilities, the Bluewater facility’s more recent design and construction makes it capable of more flexible operations to help protect the Gas Utilities and their customers from changing market conditions. The Bluewater facility’s enhanced capabilities include:

- Higher withdrawal characteristics to help protect against high natural gas price periods during the winter months.
- Higher injection characteristics to take advantage of low natural gas pricing periods throughout the year.
- One of the facility’s storage fields can be regularly cycled independent of the other field, providing opportunities to optimize operations in response to market conditions.

Because of its more recent design and construction, the Bluewater facility is less likely to require major investments in the near term to modernize and comply with new safety and environmental requirements. As discussed above, older storage facilities will require hundreds of millions of dollars to improve safety and operations and to reduce environmental impacts.

¹⁷ A certain quantity of “base gas” is held to ensure an adequate amount of pressure to support injections and withdrawals of (1) the “working gas” stored for customers like the Gas Utilities who typically inject gas in the summer and withdraw gas to serve higher demands in the winter, and (2) “park and loan” gas stored for customers during the winter withdrawal period.

¹⁸ The Gas Utilities have entered into additional short-term leases with BGH such that, starting in gas year 2018/2019, they will have 95% of the Bluewater facility’s storage capacity under lease.

The Bluewater facility is well connected to interstate pipelines and multiple supply basins, providing access to both the Joliet and Dawn Hubs and the Appalachian shale gas basin. Direct transportation paths from the Bluewater facility to the Guardian pipeline currently are available at very low cost. Figure 2 above shows the geographic location of the Bluewater facility in relation to other storage facilities in Michigan and the interstate transportation systems.

The Gas Utilities are confident that the Bluewater facility can continue to be operated and maintained cost effectively and efficiently because (1) BGH's existing operating employees will remain with BGH and (2) through the WEC AIA, the facility will be supported by over 50 years of experience within WEC in underground gas storage operations. Two WEC subsidiaries own underground storage facilities. Peoples has owned and operated the Manlove Field aquifer storage facility located in Champaign County, Illinois, since the 1960's. In addition, Michigan Gas Utilities Corporation ("MGU") owns and operates the Partello Field spent gas reservoir storage field in Michigan, just two hours west of the Bluewater facility. The Manlove and Partello facilities have 38.8 Bcf and 3.9 Bcf in working gas storage capacity, respectively.

Resources within WBS, the WEC service company, have expertise in reservoir analysis, well integrity, compressor operations, SCADA and plant control systems, gas processing equipment operation, and pipeline integrity. The Bluewater facility will also be supported by a gas supply function with extensive experience in compliance with federal control room management regulations. Advanced processes to manage operations and maintenance from WEC's Power Generation area are being applied to gas storage operations at Manlove and Partello and will be applied at Bluewater. External resources include experts in gas well diagnostics and control. All of these resources will be made available to ensure the safe,

compliant and efficient operation of the Bluewater facility for the benefit of the Gas Utilities and their customers.

The Proposed Storage Transactions

On January 20, 2017, WEC entered into a purchase and sale agreement to acquire BGH from Plains All American Pipeline, L.P. The structure of the acquisition, obtaining ownership of the Bluewater facilities indirectly through WEC's acquisition of BGH, is intended (1) to insulate the Gas Utilities and their customers from the risks of owning and operating a natural gas storage facility that continues to provide gas storage services to third parties, and (2) to avoid the need for BGH to seek FERC approval to abandon tariffs and certificates, and for each of the Gas Utilities to obtain a FERC certificate to own and operate the facility in interstate commerce and FERC approval of new tariffs.

The total acquisition cost of \$230 million (\$225 million purchase price plus \$5 million in transaction costs) represents a fair market value for Bluewater. The price was arrived at through a competitive bidding process. In developing its bid, WEC was informed by the costs the Gas Utilities currently incur for cost-based and market-based storage and transportation capacity. ■■■

Upon the acquisition closing, the Gas Utilities will enter into sixty-year service agreements with BGH. [REDACTED]

The total quantity of storage capacity under the service agreements will be allocated to the Gas Utilities in

proportion to their current peak day demands: Wisconsin Gas 40%, Wisconsin Electric 35%, and WPSC 25%.

Between the Gas Utilities and third parties, the Bluewater facility is fully leased for gas year 2017/2018. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

The Bluewater facility's 23.2 Bcf of working gas storage capacity will represent about 30% of the Gas Utilities' total gas storage portfolio. The remainder of the Gas Utilities' portfolios of storage and associated transmission will remain a mixture of cost-based and market-based arrangements of short and medium term, resulting in a high degree of diversification that will provide the Gas Utilities and their customers with a level of protection from the scarcity of availability and cost of these services.

Figure 4 shows the diversification of the Gas Utilities' combined storage as of 2027. [REDACTED]

[REDACTED]

Figure 4



The long-term service agreements with BGH, the form of which is included in Attachment 2, will provide the Gas Utilities with access to storage capacity on terms comparable to ownership. The Gas Utilities will be responsible for the full cost of acquiring BGH and operating and maintaining the Bluewater facility over the sixty-year term, including the return on and of the price by which WEC acquired the Bluewater facility. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

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Age Group	Gender	Percentage
18-29	Female	85%
	Male	75%
30-49	Female	75%
	Male	65%
50-59	Female	65%
	Male	55%
60+	Female	45%
	Male	55%

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

The Proposed Transportation Arrangements

Securing long-term access to gas storage creates a unique opportunity for the Gas Utilities to lock in significant savings for their customers through the execution of new lower-cost and long-term gas transportation contracts for delivery of gas between the Bluewater facility and Wisconsin. The Gas Utilities will use firm natural gas transportation capacity currently available on Vector to deliver gas to and from the Bluewater facility, and gas withdrawn from the Bluewater facility will be transported to Vector's interconnect with Guardian in Joliet, Illinois. The Gas Utilities will then utilize their existing capacity on Guardian to deliver the gas withdrawn from storage to their local distribution systems.

[REDACTED]

[REDACTED]

[REDACTED]

Initially, the Gas Utilities will contract for [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] More detail about the Gas Utilities' transportation approach is provided in Attachment 3, and the form of transportation agreement is provided in Attachment 4.

Expected Economic Benefits of Long-Term Storage and Transportation Arrangements

Attachment 5 presents the Gas Utilities' economic analysis of the proposed long-term natural gas storage and transportation strategy described above. In this analysis, the Gas Utilities compared (1) the costs they would incur for long-term access to Bluewater storage and the associated transportation arrangements to (2) the costs they would incur using their traditional portfolios of services contracted on a shorter-term basis. The Gas Utilities assumed that the cost of operating and maintaining the Bluewater facility will escalate at the same rate as the cost of shorter-term cost-based and market-based services. This is a conservative assumption because, as discussed above, the Bluewater facility is relatively new and should not need the same level of investment to modernize and comply with new safety and environmental requirements that older storage facilities in the Midwest, including the majority of ANR's facilities, will. Therefore, WEC's acquisition of the Bluewater facility will significantly reduce the Gas Utilities' exposure to storage cost increases of this nature.

The savings reflected in the economic analysis are threefold. First, the cost of long-term access to storage capacity under the BGH service agreements will be lower than the cost of continuing to purchase a similar quantity of cost-based and market-based storage services on a

shorter-term basis. One source of lower cost is the ability of each of the Gas Utilities to reduce the level of pipeline “no notice” balancing service they currently purchase. The displacement of winter term supply and the Bluewater facility’s enhanced injection capability will provide the Gas Utilities with increased daily supply flexibility and, thus, less need for no notice service.

Second, the Gas Utilities’ long-term access to storage capacity in Michigan will enable them to make long-term commitments to purchase lower cost transportation capacity on the Vector pipeline. The Gas Utilities’ ability to decrease their reliance on higher-cost transportation capacity will generate significant savings that will increase over time.

Third, WEC’s ownership of the Bluewater facility will enable the Gas Utilities to optimize their use of the storage capacity in response to market conditions because the long-term service agreements with BGH [REDACTED]

[REDACTED] In addition, BGH generates revenues from sales of gas storage service to third parties, the provision of “park and loan” gas services, and opportunity sales of gas out of storage. Under the long-term contracts with BGH, these revenues will be passed directly on to the Gas Utilities and then to their customers.²¹

Under “park and loan” arrangements, shippers agree to “park” gas in storage during the winter months and “loan” that gas to BGH to satisfy the withdrawals made by working gas storage customers (like the Gas Utilities) during the heating season. BGH then restores the gas it borrowed in the spring. Depending on market conditions, park and loan service can be a net cost or a net revenue for BGH.

²¹ There is also the potential for a small amount of additional revenue from the sale of small quantities of oil that are occasionally recovered as a byproduct when gas is withdrawn. Since this is not certain, the Gas Utilities have assumed no oil byproduct revenues in their economic analysis.

Through their access akin to “ownership” of the Bluewater facility, the Gas Utilities will be able to achieve cost reductions for their customers from optimizing injections and withdrawals throughout the year, including withdrawals of peak and lean gas during the heating season. For example, Peoples optimized its withdrawals of gas from Manlove Field during the 2013-2014 Polar Vortex winter and realized \$[REDACTED] in savings that were passed through to its customers. Over the life of the asset and assuming similar conditions, the Gas Utilities estimate that BGH could generate \$[REDACTED] in NPV savings for customers.

In the Gas Utilities’ Base Case, and compared to leasing similar amounts of gas storage and transportation capacity on a shorter-term basis, locking in about 30% of their requirements with long-term access to Bluewater storage capacity on terms and conditions similar to ownership and supported by lower cost transportation on the Vector system will reduce the Gas Utilities’ purchased gas costs by about \$200 million NPV over the next sixty years, a reduction of about [REDACTED].

In addition to these savings, the Gas Utilities’ long-term access to up to 23.2 Bcf of working gas storage and the associated transportation will provide a substantial hedge against higher costs in the future. The Gas Utilities’ “high storage cost” case provides an indication of how valuable this hedge could be. In this case, the total benefits increase to [REDACTED] or about [REDACTED]% in savings.

The Gas Utilities also modeled a “low storage cost” case to test whether the proposed transactions will reduce the Gas Utilities’ purchased gas costs even if the cost of storage does not increase as much as in the base case. Even in the Gas Utilities’ “low storage cost” scenario, the total benefits are still [REDACTED] or a reduction of about [REDACTED]%.

Rate Impact and Cost Recovery

As with other utility investments, the return of and on the upfront cost of acquiring the Bluewater facility will be the highest in the first year and will then decrease over time as the asset is depreciated (subject, of course, to additional capital investments made to the facility over time). Therefore, the cost to the Gas Utilities passed through the long-term storage service agreements with BGH will be higher than the expected savings from the acquisition in first few years. The first-year rate impact to a typical residential gas customer who uses 800 therms/year is estimated to be between [REDACTED] depending on the Gas Utility, which equates to an annual bill increase of between [REDACTED]. As shown in Figure 5, by the fourth gas year under the service agreements through the end of their term, the Gas Utilities' customers should experience annual net rate decreases that get larger over time.

Figure 5

The Gas Utilities seek Commission approval to recover their costs and pass through the revenues they receive under their long-term contracts with BGH through their respective purchase gas adjustment clauses. Because the Gas Utilities will have access to their contracted storage for balancing throughout the year, the Gas Utilities propose to initially recover their net storage costs from retail sales based upon annual demand requirements. The Gas Utilities may propose in future rate proceedings to collect a portion of the net Bluewater storage costs from transportation customers as an appropriate cost of providing daily balancing service.

Affiliated Interest Agreement Changes

Attachment 6 is a marked version of the current WEC AIA showing the limited number of changes proposed to accommodate WEC's acquisition of an affiliate that owns and operates a natural gas storage facility and to ensure that BGH has access to the full range of resources

available within WEC. In brief, the propose changes (1) make BGH’s subsidiary BGS, which is a FERC-regulated storage service provider, a “Regulated Party” so that it has access to all of the services available to the Gas Utilities to support the Bluewater facility, (2) revise some service descriptions to expressly include natural gas storage service, and (3) limit certain reporting requirements to state-regulated utilities where appropriate. The Gas Utilities seek Commission approval of these changes under Wis. Stat. § 196.52.

Conclusion

For the reasons stated in this Application, the Gas Utilities respectfully request that the Commission grant the relief requested to facilitate the Gas Utilities’ proposed long-term natural gas storage and transportation strategy for the benefit of the Gas Utilities’ customers.

Dated this 3rd day of February, 2017.

Bradley Jackson
State Bar No. 1005468
Joe Wilson
State Bar No. 1052468

____/s/_____

QUARLES & BRADY LLP
411 East Wisconsin Avenue
Milwaukee WI 53202
Attorneys for
Wisconsin Electric Power Company

Catherine Phillips
State Bar No. 1025503
Wisconsin Electric Power Company
231 West Michigan Street
Milwaukee WI 53203

Attachments to the Application

Attachment 1	Role of Natural Gas Storage and Transportation in Local Distribution Service
Attachment 2	Form of Firm Storage Service Agreement
Attachment 3	Firm Transportation Summary
Attachment 4	Form of Precedent Agreement between Vector Pipeline, L.P. and Vector Pipeline Limited Partnership and WEC Utilities
Attachment 5	Economic Analysis
Attachment 6	Proposed Changes to WEC AIA

Attachment 1

Role of Natural Gas Storage and Supporting Transport in Local Distribution Service

This attachment describes the critical roles that storage and transportation services play in meeting the Gas Utilities' deliverability obligations. The Gas Utilities have an obligation to serve 100% of their sales service customer load and to balance 100% of all gas supplies delivered to their distribution system (including that of utility transport customers).¹ This obligation makes firm storage with supporting firm pipeline transport service a highly valued, necessary gas supply resource. Storage plays a different role for non-utility storage holders, who use storage as a tool in their marketing of natural gas and hedging against variations in natural gas prices.

Firm Storage Service

The Gas Utilities currently contract for storage service on a short- and intermediate term (1-5 years) basis. This storage is predominantly located in Michigan, contracted with the following storage providers and operators.

- ANR Pipeline Company
- ANR Storage Company
- Bluewater Gas Storage, LLC
- DTE Gas Company
- Guardian Pipeline Company (which, in turn, contracts with Bluewater Gas Storage, LLC)

Combined with firm transport service held on the Great Lakes, Vector, Guardian, and ANR pipelines, these storage contracts are used to satisfy approximately [REDACTED] of the Gas Utilities' winter seasonal sales requirements and [REDACTED] of their winter peak day sales service requirements.

Owing to the higher flexibility for the injection and withdrawal rights it provides, most of the Gas Utilities' storage service is of the "annual" variety, subject to daily deliverability "ratcheting".

"Seasonal service" follows a standard summer injection and winter withdrawal pattern only, annual service provides for "counter-cyclical" injection and withdrawal capability. For example, with annual service, storage injections are allowed during the winter and storage withdrawals are allowed during the summer period - i.e. "counter" to the normal storage cycle. This

¹ "Sales service" refers to the customer requirements for which the Gas Utilities have a presumed obligation to acquire and deliver gas supplies as needed. "Transport service" refers to the customer requirements for which the Gas Utilities do not have an obligation to acquire and deliver gas supplies to the city gate. In other words, the Gas Utilities' role is limited to providing daily supply balancing at the gate station and distribution system deliverability to transportation customers.

flexibility helps the Gas Utilities balance their combined supplies with temperature sensitive demand, particularly during warmer winter and colder shoulder months.

The Gas Utilities typically contract for “ratcheted” storage services, where firm injection and withdrawal rights are a mathematical function of actual inventory balances and the operational capabilities of the storage field. For example, as inventory balances decline with withdrawals, the service withdrawal rights also decline at set inventory level points, known as “ratchets.” Conversely, as inventory rises with injections, the service injection right declines at set inventory levels, or “ratchets.” A more expensive “un-ratcheted” service that retains 100% withdrawal and injection rights regardless of inventory balances can be obtained. While less flexible and requiring more oversight, ratcheted service marks a tradeoff against the higher fixed cost of un-ratcheted service.

Firm Transport Service

Market area pipeline transport service to and from the storage field’s delivery and receipt points provides for the orderly injection and withdrawal of storage inventory. Given their obligation to serve and to balance customer demand and supply daily, the Gas Utilities must assure the availability of timely injection and withdrawal capability. This is often accomplished by acquiring pipeline transport service on a firm, primary point² basis. This approach is critical to ensure the timely availability of the Gas Utilities’ supplies from storage in the winter months and into storage in the summer months.

As to **winter storage withdrawals**, the Gas Utilities’ obligation-to-serve requires the acquisition of primary firm transport service from storage to the Gas Utilities’ gate stations or to another pipeline for re-delivery to the Gas Utilities’ gate stations.

As to **summer storage injections**, the Gas Utilities’ need to meet storage inventory fill targets in a timely manner requires the acquisition of firm transport service from the gas supply point of purchase to the storage field during the summer injection period.

For **counter-cyclical injection and withdrawal**, seasonal transport services used on a secondary (counter-directional) basis can provide adequate delivery without requiring the acquisition of incremental firm primary transport service.

How Firm Storage and Transport Services Together Provide Value

For the Gas Utilities, firm storage service provides value in several ways. Two uses are particularly critical. First, storage provides a firm gas supply source needed to meet high winter peak day sales demand; colder-than-normal winter seasonal and intra-month sales demand; and, variable shoulder month (Apr-May-Oct) sales demand. Second, with a combination of firm

² Primary, or point-to-point, deliverability is a reference to the contractual route of transport service. Contractual delivery from a specific receipt point to a specific delivery point provides the lowest risk for operational reduction or “cutting” of gas supply deliveries. Whether this is characterized as a forward-haul or a back haul is a function of the as-designed- flow direction, and is generally irrelevant as long as it is a firm, contracted service.

storage and transport service deliverability, the Gas Utilities can balance distribution system operations between the supply delivered on behalf of sales customers³ and that delivered by transport customers on their own behalf.

- **Meeting High Seasonal and Winter Sales Demand**

A significant portion of the Gas Utilities' winter demand requirements, in particular the winter peak day, are met with storage-based supply. From a **day-to-day** scheduling and nomination perspective, storage is a highly flexible and reliable source of firm daily supply.⁴ As such, storage supply is typically the first supply that is called on to meet projected rising customer demand. As colder temperatures dissipate storage is typically one of the first sources of firm supply to be reduced. To the extent that the storage is of the annual variety, then the response to demand volatility can be counter to the "normal" injection-in-the-summer and withdraw-in-the-winter approach (i.e. counter-cyclical), which helps balance warmer-than-normal winter and colder-than-normal shoulder month demand.

In short, when firm storage is combined with adequate firm transport service, it provides most of the Gas Utilities' ability to flex and balance their gas supply portfolios⁵ in anticipation of and in response to changing day-to-day customer demand.

- **Balancing Sales and Transport Customer Supplies**

With a 10-to-1 winter-peak-to-winter-minimum-day sales demand ratio, and with daily transport service loads that can amount to one-third or more of total daily gas requirements, storage plays an important role in the management of **intra-day supply variation** at the Gas Utilities' city gates. As the operators of their city gates, the Gas Utilities are required to balance all delivered city gate gas supply on as near-to-real time basis as practicable. Firm storage service, coupled with firm transport service to the city gate(s), helps them do that.

³ In addition to storage the Gas Utilities have a mix of long-haul and short-haul pipeline capacity under contract to ship real-time-production gas supplies. Long-haul capacity is used to transport spot gas supply from the more distant production areas such as Texas and Oklahoma, while short-haul capacity is used to transport gas supply from closer, integrated supply hubs such as the Chicago Hub. Acquired under a term agreement or as a short duration or "spot" purchase, the underlying gas supply is combined with storage supplies to meet seasonal and peak requirements.

⁴ Withdrawal and injection levels can be adjusted for the short term by a simple nomination change.

⁵ It is noteworthy that in some instances a firm storage service is "bundled" with the firm transport services needed to facilitate the injections to and the withdrawals from a specific storage account. Reflective of a more traditional contracting approach, the key benefits of "bundling" lie in the complementing terms and conditions, most notably matching the contract duration and receipt/delivery points. Unfortunately, the all-or-nothing contractual framework limits a subscriber's ability to keep one or the other service upon expiration and that serves to lessen the practical value of "bundling".

For example, during periods of unseasonably warm winter temperatures the Gas Utilities can turn off all previously nominated withdrawals from storage in order to limit the supply flowing to their distribution systems. The Gas Utilities did this numerous times during the 2015-16 winter period. By the same token, during a day of colder-than-anticipated temperature swings, the Gas Utilities can increase deliveries to their service areas by increasing storage withdrawals on an intra-day basis. The Gas Utilities did this numerous times during the “Polar Vortex” winter of 2013-14.

Even during periods of lower temperature and demand volatility, storage provides the flexibility by which the Gas Utilities can balance all supplies delivered to their distribution systems.⁶ This can be accomplished through day-to-day and even intra-day revisions to storage injection/withdrawal nominations. The Gas Utilities also rely on a bundled pipeline load balancing service known as “no-notice-service”, which accommodates unanticipated after-the-fact storage injections and withdrawals in order to eliminate pipeline daily imbalances. No-notice-service typically features a high annual service fixed cost, does not increase city gate deliverability during high demand or peak periods, and requires a storage account for balancing and billing purposes.

- **“Everyday” Availability/Flexibility**

To ensure firm supply availability during the winter period, the Gas Utilities typically contract up to nine months in advance from third parties for firm base load and swing flowing gas supplies at various production areas and supply hubs. These agreements are generally referred to as term supply contracts and can include 100% daily must-take (“base load”) agreements, as well as more flexible-take (“swing”) agreements that provide for a reduced must-take-supply requirement.

Term base load supply provides the Gas Utilities with a significant volume of firm gas supply throughout the winter season. Term base load supply can be used to meet customer demand as well as satisfy certain pipeline operating requirements. For example, on the Northern Natural pipeline at Carlton, the Gas Utilities must stand ready to deliver gas supplies at any time and for potentially long periods of time during the winter.

From a fixed cost perspective, a three to five month base load term agreement features a considerably lower fixed cost than a three to five month term swing contract, and term swing contracts are typically less costly than the more flexible firm storage arrangements.

⁶ Because a gas utility typically owns and operates the interconnecting gate station facilities (custody transfer points) it is considered the “point operator” by the interconnecting pipeline. For balancing and billing purposes, the gas utility receives its share of nominated gas supply as the “last-through-the-meter” behind all other shippers at the gate station. The flexibility of storage service is useful in balancing deliveries in a timely manner and avoids pipeline balancing and/or penalty charges as the point operator.

Firm storage is not always available to the Gas Utilities at their interstate pipeline interconnections, however. While the flexibility of term swing contracts helps the Gas Utilities manage variations in demand, their use is limited. For example, a typical Dec-Mar, 0% to 100% take on a 10,000 Dth/day term swing contract limits days-of-use to fifty within the 121-day Dec-Mar calendar period. The 50-day availability then declines with each nominated take regardless of how much of the full 10,000 Dth MDQ is called on any of the fifty days it is used.

In addition, because a term swing supply contract typically allows for a firm nomination right on a business day only, a Friday nomination in anticipation of colder weekend weather is likely to carry-through to the following Monday regardless of the actual, ensuing weather (demand). This can be made worse if the preceding Friday or following Monday is a U.S. or Canadian holiday.

Unlike term swing supply, firm storage service is a **seven-day a week (everyday)** supply source wherein nominations and nomination changes are not restricted to business-days. Weekend withdrawal and injection activity can be modified, making significantly more efficient use of the stored supply and mitigating the need for pipeline no-notice service.

- **Credit Qualifications/Risk Mitigation**

Persistent challenges in acquiring sufficient term and swing supplies from third parties are the credit requirements and concentration limitations for suppliers (producers, marketers) that elect to participate in the bid process. The number of providers has declined in recent years due to market consolidation and changing corporate strategies, thus competition for the Gas Utilities' term supply business (volume, scale of offerings) has become more limited. This has put the Gas Utilities in a less favorable buying position for term supply as supplier credit and portfolio concentration limits are more quickly reached and the suppliers are ultimately eliminated from the bid list. By contrast, qualifying storage service providers typically carry higher credit standing due to the lack of a commodity cost exposure.

Said differently, the lower credit risk of a storage provider means the Gas Utilities do not have to "reach"⁷ for a term supply package from a less-qualified or higher-concentrated supplier, enhancing the appeal of storage from a commercial perspective. As a result, because the Gas Utilities need to meet peak and seasonal sales demand, their respective storage portfolios will need to expand in order to fill any firm supply void resulting from, amongst other things, credit performance issues.

⁷ "Reaching" for a particular supply package implies that the buyer is willing to (1) pay more for that package of supply on a fixed or variable cost basis; (2) accept non-cost terms and conditions that are inferior to other packages; (3) seek an internal senior management exception; or (4) permit some or all of the above.

- **Commodity Price Benefits**

Unlike the term gas supplies which are typically priced at a daily or first-of-month published index price, storage inventory is priced at the weighted average cost (WACOG) of the gas supply injected across the previous summer period. This fixed price attribute of storage inventory provides the Gas Utilities with a fixed-price **hedge against winter gas price volatility** in two ways.

- **As a Seasonal Price Hedge**

Storage based supply typically provides a seasonal (summer-to-winter) commodity price advantage over winter, first-of-month priced term supply. Across the preceding summer months, gas inventory injections can be acquired at a lower market price than gas supplies acquired the following winter. This result depends on seasonal ambient temperatures (i.e. winter heating, summer cooling) and the lag effect of national storage inventory levels entering the summer period (i.e. storage injection requirements). All things considered, when combined with firm transport service for the purpose of making scheduled inventory injections, storage generally rewards the storage holder with a favorable summer-to-winter (seasonal) price advantage.

- **As an Intra-month/Daily Price Hedge**

To the extent that storage service allows flexible withdrawal nominations, it can provide the ability to increase the Gas Utilities' total supply deliveries on a daily (call-type) basis. This helps the Gas Utilities avoid paying for higher-priced, intra-month supply purchases⁸ when rising demand increases spot market pricing⁹.

It might be argued that the expanded use of gas for summer electric generation will serve to reduce the potential for seasonal price differentials. However, it can also be argued that to the extent gas generation activity extends to the winter months, this may not be the case. In fact, because the winter period can find both the gas and electric utilities competing for the same supply, the seasonal/intra-month/daily market price volatility and spreads are more likely to increase.

⁸ Intense cold periods of even a short duration can compel the Gas Utilities to purchase of daily gas supply to:

- preserve the deliverability of term swing supply contracts;
- protect LNG or LPG peaking plant inventory; and/or
- provide a physical gas supply offset to a force majeure event that is reducing term supply availability.

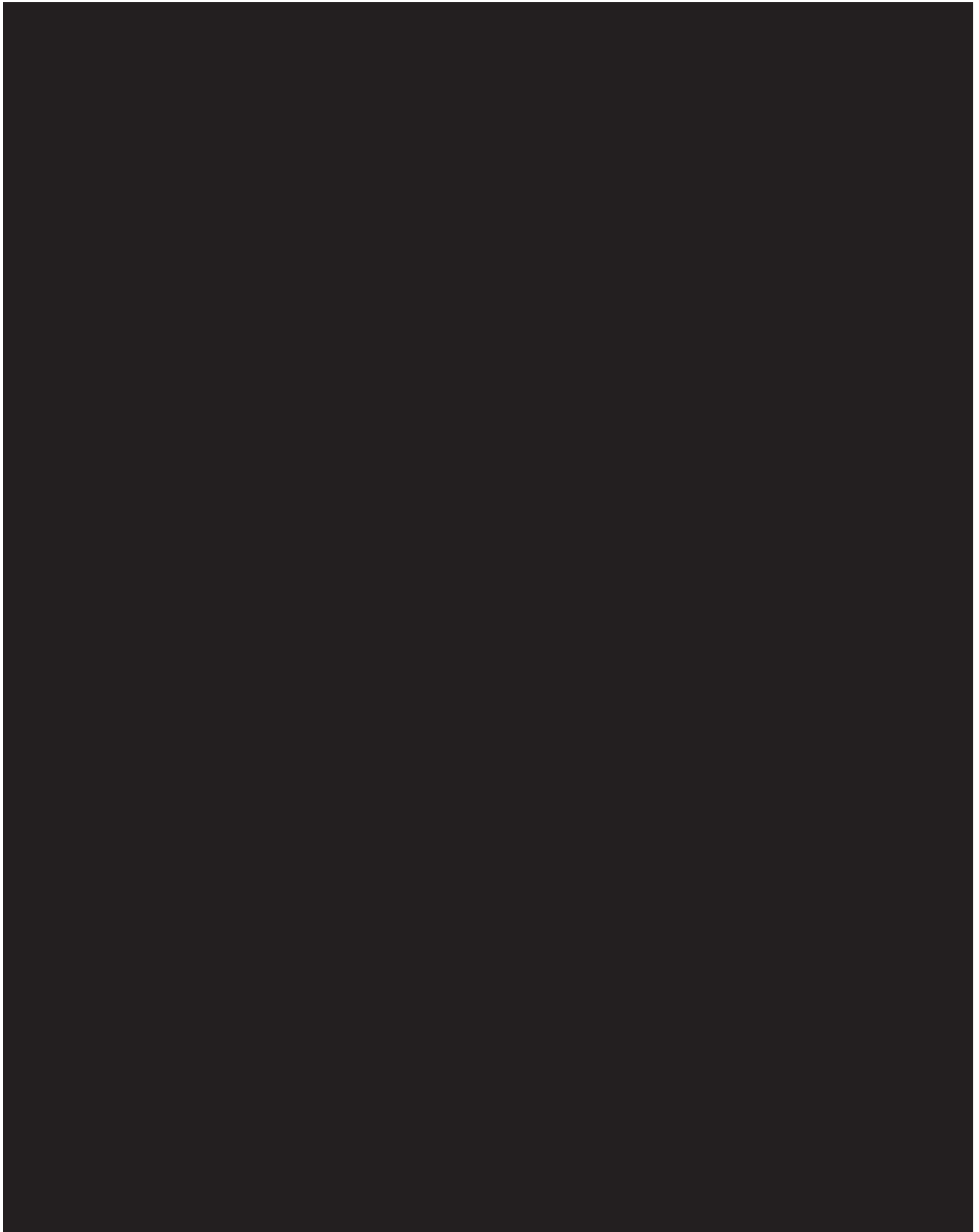
⁹ So as not to acquire too much firm gas supply for the winter, the Gas Utilities put into place a firm winter supply portfolio that satisfies 100% of the projected firm sales demand of that period. However, by its nature the "100% load factor guideline assumes perfect dispatch across a normal or average winter. In the event that the Gas Utilities encounter colder-than-normal intra-month temperatures and increasing demand, additional supply purchases may be required to maintain firm peak and/or seasonal deliverability for the remainder of the winter period.

Summary

For the Gas Utilities, firm market area storage and corresponding firm transport service provides a myriad of reliability, system balancing, commodity pricing, and contracting benefits that readily accrue to natural gas customers in Wisconsin.

Attachment 2

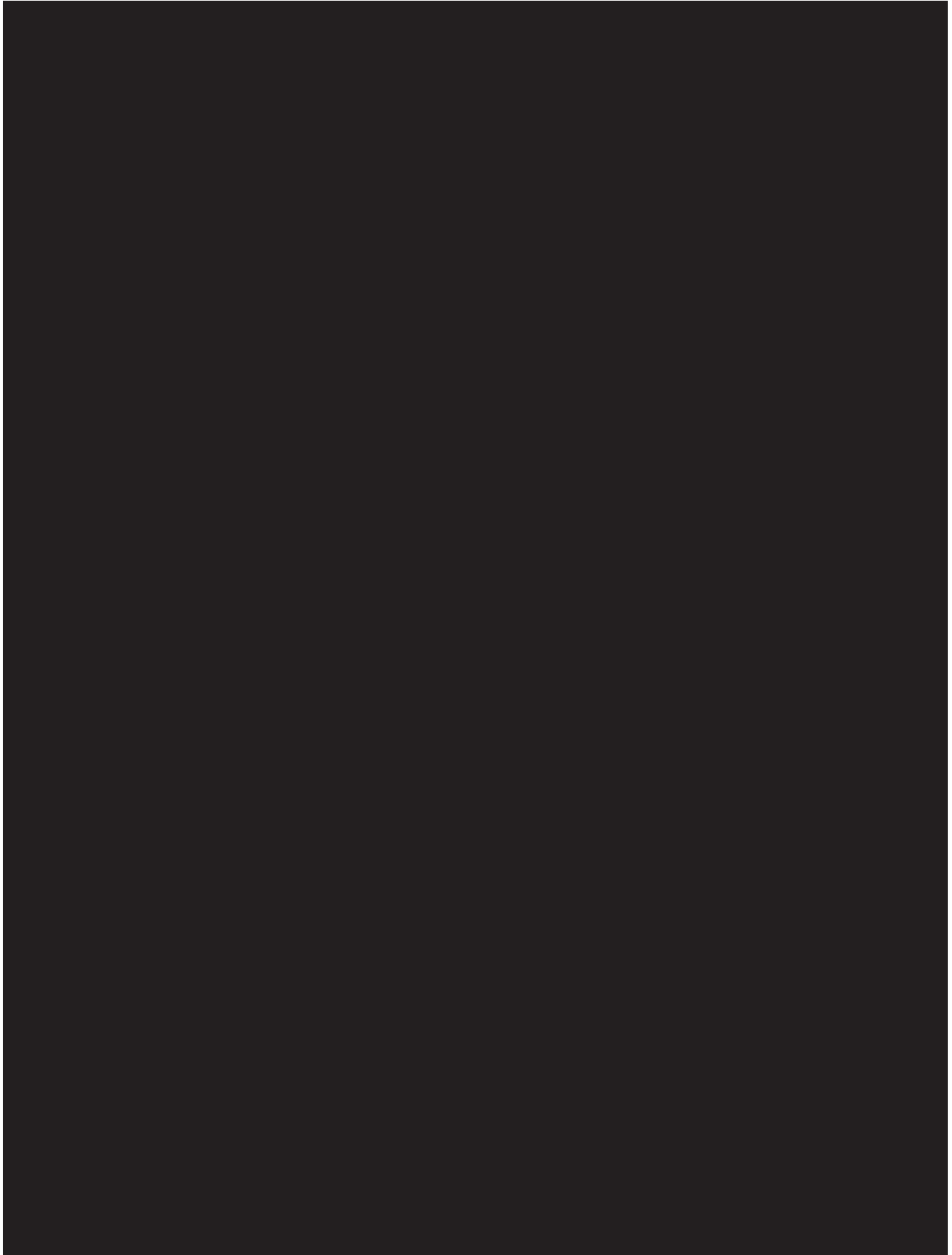
Form of Long-Term Storage Service Agreements



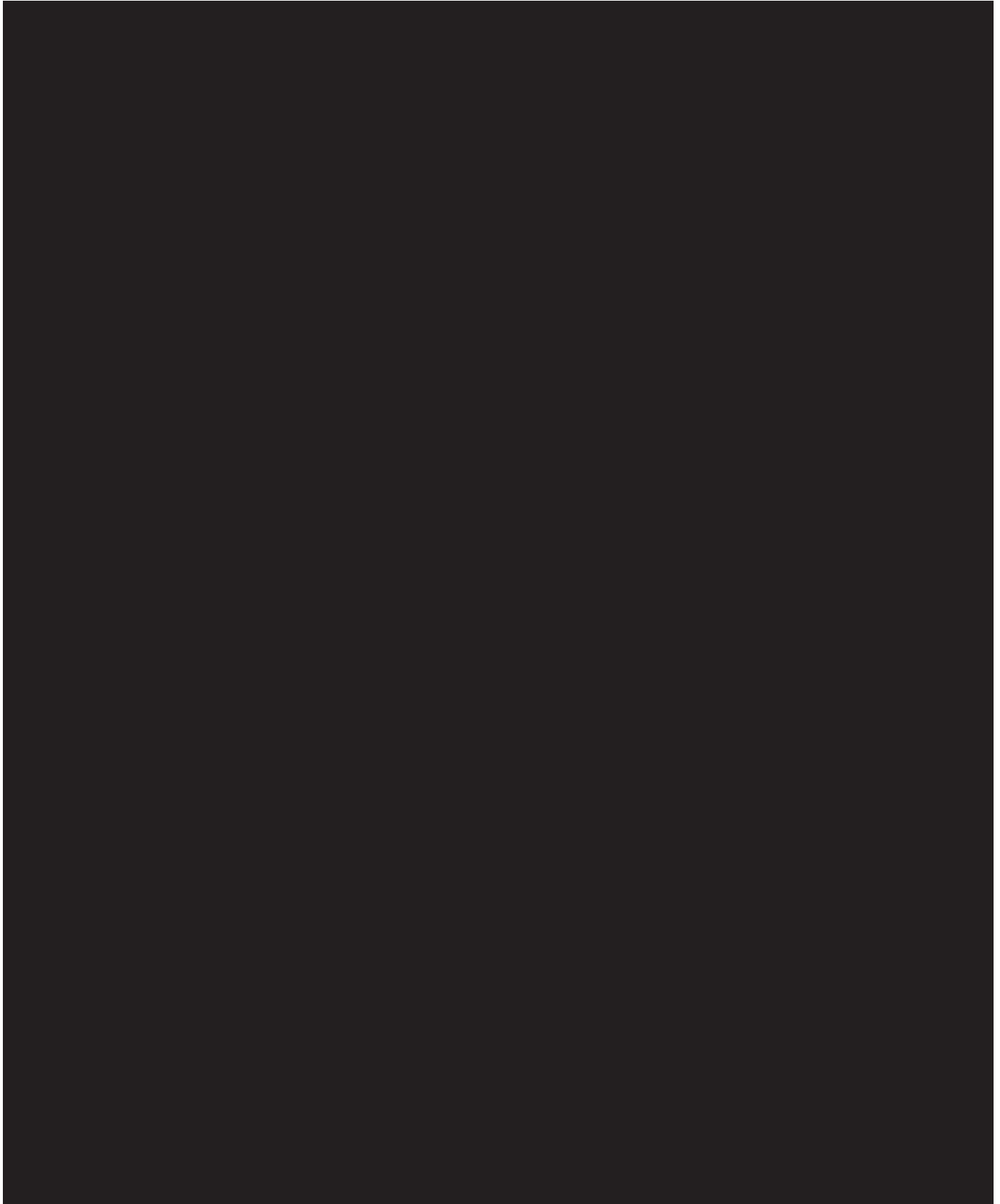














[REDACTED]

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[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

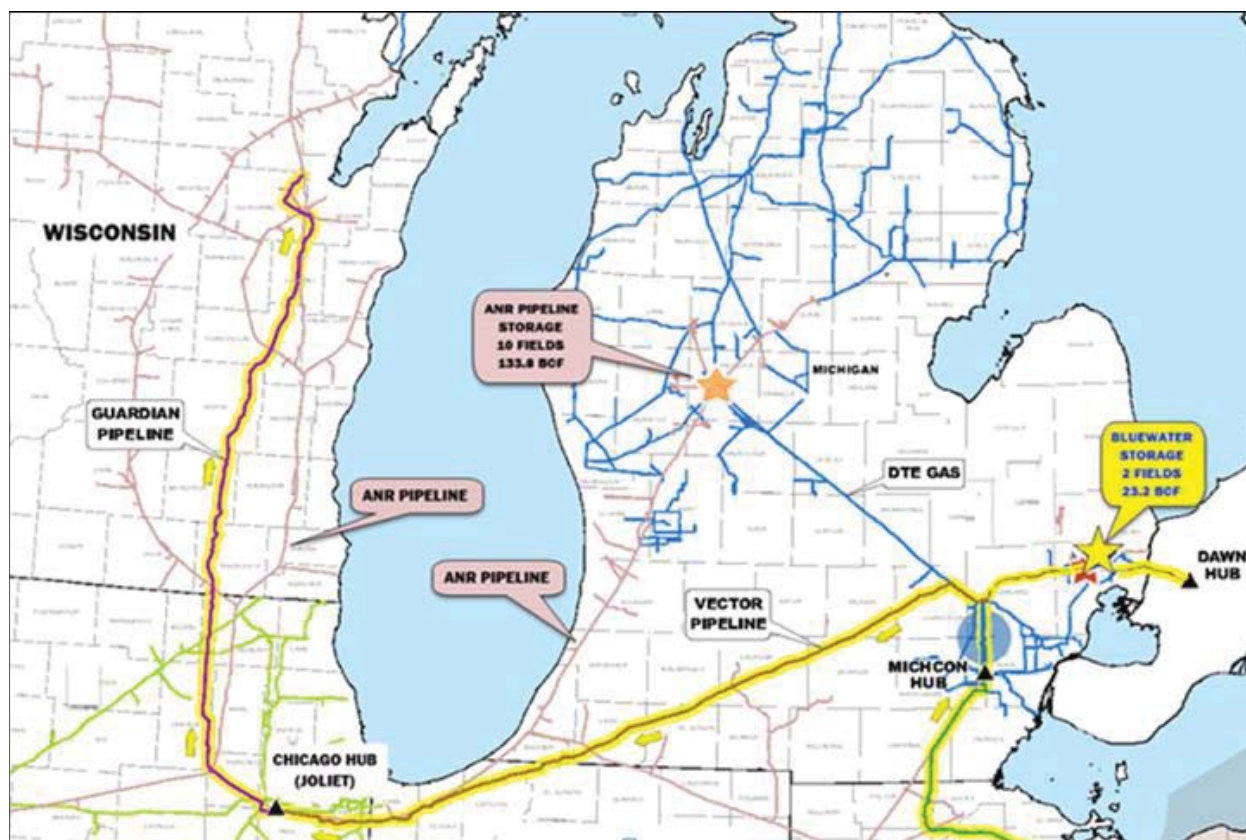
[REDACTED]

Attachment 3

Firm Transportation Arrangements

With the Guardian pipeline providing the firm facility by which the last leg of storage inventory would be delivered, the Vector pipeline will provide the Gas Utilities with the upstream firm path required to move inventory from storage (withdrawals) into Guardian. Vector will also provide the necessary capacity from the Dawn and Chicago Hub(s) for injection into Bluewater storage.

In addition to these two important hubs, the transportation capacity that Gas Utilities will lease on Vector will also provide the Gas Utilities with access to the Nexus and Rover pipeline projects currently under development. These projects are expected to bring 4.47 Bcf/d of Marcellus and Utica shale gas supplies for transportation on Vector to the Dawn Hub (and other markets) as early as November 2017.



Referring to the map above, Vector extends from the Chicago Hub (also referred to as the Joliet Hub), located in Illinois to the Dawn Hub in located in Ontario. As proposed, Vector firm transportation from east-to-west (backhaul) will be used to facilitate withdrawals from

Bluewater storage, and from both east-to-west and west-to-east (forward haul) to facilitate injections. In more specific terms, the proposed Vector firm transportation, a mix of existing and incremental (stepped in) contract capacity, will support:

- Withdrawals
 - From Bluewater storage to Guardian at Joliet Hub (east-to-west).
 - From Dawn Hub to Bluewater (east-to-west)
 - From additional supply access from Nexus and Rover pipeline projects
- Injections
 - From Joliet Hub to Bluewater storage (west-to-east).
 - From Dawn Hub to Bluewater storage (east-to-west).
 - From additional supply access from Nexus and Rover pipeline projects

As proposed, the Vector capacity is illustrated as a stepped-service MDQ on the following table¹:

Firm Transportation Capacity Requirements (Dth/Day)



¹ The existing backhaul contracts for WE and WG (86,000 Dth/Day) will be rolled-in to the quantities of storage under the long-term agreements when they expire.

² 

Vector Firm Transportation Service to Support Storage Withdrawals

In general, withdrawal transport service originates at an assigned storage facility point or header system and flows from there directly to the city gate or into another pipeline wherein the shipper holds firm capacity to the city gate. This latter approach reflects the route contemplated for the proposed storage service. In order to guarantee delivery of the maximum inventory withdrawal when it is needed, the winter transport service volume must match the maximum storage service withdrawal rate for the associated storage service. This includes full firm receipt from the storage point to the designed point of re-delivery less compression fuel as the only volumetric difference.

Withdrawal Capacity (East-to-West):

Based on [REDACTED] service the Gas Utilities will need to secure up [REDACTED] of Vector firm transportation from Bluewater to Guardian. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] WE and WG currently have contracts for approximately [REDACTED] of existing firm transportation capacity on Vector to deliver natural gas from Bluewater to Guardian. These contracts will expire after the 2019/20 gas year. The Gas Utilities propose to utilize their existing transportation capacity on Vector plus new contracts for the remaining firm transportation on Vector to meet these needs. The contract the Gas Utilities have negotiated with Vector for withdrawals include a ramp up of firm transportation capacity as additional Bluewater storage comes available. The rates Vector has agreed to accept for the total new firm transportation needed for withdrawals are noted below.

**Vector Firm Transport Rates – Bluewater to Joliet
(Winter Only)**

Term Start	Term End	Rate (in \$/Dth) ³
██████████	██████████	██████████
██████████	██████████	██████████
██████████	██████████	██████████
██████████	██████████	██████████
██████████	██████████	██████████

**Vector Canada Firm Transport Rates – Bluewater to Dawn Hub
(Winter Only)**

Term Start	Term End	Rate (in \$/Dth)
██████████	██████████	██████████

Vector Firm Transportation Service to Support Storage Injections

As to the transport service required to support inventory injections, traditional summer market (gas demand) conditions have historically allowed for a measure of flexibility with respect to the maximum daily quantity (MDQ) required to meet inventory injection needs. More specifically, for a storage service with a right to inject up to 1/175th of the maximum storage quantity (“MSQ”) in one day, an equivalent level of firm transport MDQ should support injection needs across the 214-day (or 1/214th) summer injection period (April through October).

Looking forward, as LDCs seek to reduce gas costs the continuing evolution of “more efficient”, load-shaped LDC winter supply and service portfolios will continue to put pressure on the need to have flexibility in managing their storage services. Adding to that, growth in gas generation requirements across the year would seem to create competition for those same supply assets. The Gas Utilities believe it prudent to acquire the maximum daily level of the proposed storage’s summer injection rights, or 1/175th of the MSQ, even if that goal requires a stepped-in approach over multiple years. To that end, the Vector injection transport services included in this proposal are illustrated as stepped-service MDQs as shown in Figure 6 of Attachment 5. Based on utilizing a 175 day injection period it was determined that the Gas Utilities will need

³ After the 20 year contract term the transportation rates are assumed to be equal to the Vector transportation rate assumed in the Alternative Case, which includes a █████ percent escalation rate.

to secure up to [REDACTED] of firm injection capacity. Injections into Bluewater storage will be sourced from both the Joliet and Dawn Hub(s) and are further described below:

Injection Capacity (West-to-East)

[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
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[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]

⁴ After the 20 year contract term the transportation rates are assumed to be equal to the Vector transportation rate assumed in the Alternative Case, which includes a [REDACTED] percent escalation rate.

- **Vector Pipeline – Dawn to Bluewater (East-to-West)**

In an effort to minimize the impact of daisy chained transport contracts the Gas Utilities are also planning on securing alternate capacity on Vector with natural gas supplies being sourced from the Dawn Hub to Bluewater. This takes advantage of the lower firm transportation rate for the shorter distance injection path from the Dawn Hub to Bluewater as compared to stacking transportation rates on Vector and DTE when sourcing natural gas from the Joliet Hub.⁵

Historically, the basis differential has been higher for natural gas purchased at the Dawn Hub compared to the Joliet Hub. However, the majority of that differential is experienced during the withdrawal season (winter months) as compared to the injection season. Also, both Nexus and Rover plan on flowing low cost shale gas from Appalachia to the Dawn Hub and, as a result of these new supplies, the forecasted differential between the Dawn and Joliet Hubs is expected to decrease.

**Vector Firm Transport Rates – Dawn Hub to Bluewater
(Summer Only)**

Term Start	Term End	Rate (in \$/Dth)

As already noted the proposed purchase of the Bluewater storage assets represents an opportunity for the Applicants [REDACTED]

[REDACTED] The proposed transaction will provide the Gas Utilities with a unique opportunity to consolidate the Applicants' various storage assets connected to the Guardian pipeline and better align operational supply and commercial expectations, thereby enhancing the Gas Utilities' utilization of the Guardian pipeline system.

⁵ [REDACTED]

Attachment 4

**Form of Precedent Agreement between Vector Pipeline, L.P. and Vector Pipeline Limited
Partnership and WEC Utilities**

[illegible]

[REDACTED]

[REDACTED]

[REDACTED]

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Attachment 5

Storage & Transportation Economic Evaluation

To evaluate the impact to customers of the proposed storage and transportation project (“Project”), the Gas Utilities compared the net present value (NPV) cost of the Project to the projected NPV cost of continuing contract for storage and transportation services on a shorter-term basis, which has been the traditional approach utilized to meet the needs of customers. Specifically, the cost of the Project was specified as the “Base Case”, and the projected cost of continuing with the status quo specified as the “Alternative Case.” Various scenarios were evaluated to provide a range of reasonable potential outcomes. As described below, based on this analysis, the Project is projected to provide the Gas Utilities’ customers with significant savings.

1.0 Background

The Gas Utilities currently have approximately [REDACTED] of storage related services under contract. Approximately [REDACTED] of these contracts have delivery to the Guardian Pipeline (“Guardian”) at the Chicago Hub near Joliet, Illinois. This portion of the storage portfolio is the focus of the economic evaluation.

The economic analysis assumes that as their existing storage service agreements expire, the Gas Utilities will replace the storage capacity represented by those agreements with additional Bluewater capacity. The [REDACTED] of storage capacity currently held by the Gas Utilities with delivery to Guardian have various term lengths. Therefore, storage capacity is only available for re-contract when existing contracts expire and conversion of a portion of term swing supplies to firm storage.¹

As described in the Application, as their contracts with other storage providers expire the Gas Utilities will replace those contracts with firm storage service from Bluewater. Figure 1 shows the anticipated schedule of expiring storage contracts with delivery to Guardian and their replacement with Bluewater storage service. This chart only includes the incremental capacity the Gas Utilities will take from Bluewater above what they already have under contract with/through Bluewater. Once those contracts expire they are included as incremental capacity with Bluewater going forward.

¹ In addition to available term swing conversion to firm storage, Wisconsin Electric also has in its 2017/2018 gas supply plan an additional 1.0 Bcf of new storage. The Gas Utilities are not planning on converting all of their term swing supply to firm storage, only a portion of it. There are benefits to each portfolio to keep these types of services as an option for supply.

Figure 1

The economic evaluation performed is an avoided cost analysis in which the cost of purchasing Bluewater (return on and of investment), on-going operating costs and revenues, and firm transportation costs for delivery of natural gas storage from Bluewater to Guardian is compared against continued contracting for storage and transportation on shorter terms over the life of the investment. The NPV of the annual costs for each case is calculated and compared to derive the savings provided by the Project relative to the Gas Utilities continuing their current practice of contracting for storage and transportation services on a shorter-term basis.

The capital recovery of the purchase price for the Bluewater storage facility is modeled as if the Gas Utilities had made the capital investment and purchased the facility. As described in the application, numerous FERC approvals would be required in order for the Gas Utilities to own and operate a gas storage facility. In order to avoid these approvals, and as well to avoid having the Gas Utilities in the business of providing storage services to third parties, the Gas Utilities' corporate parent will purchase a corporate entity upstream (that entity being Bluewater Natural Gas Holdings, or "BGH") of Bluewater Gas Storage LLC, the entity that directly owns the Bluewater facility. BGH in turn will enter into long-term storage service agreements with the Gas Utilities under its existing market-based rate tariff. The annual contract rates will be determined based on total costs of owning and operating the storage facility as if the Gas Utilities made the capital investment and had direct ownership.

2.0 Study Period

In general, a storage field has a long useful life because it is a geologic formation that does not change over time. Many of the existing storage fields in operation today have been operating for over fifty years. The average age of ANR's storage fields is fifty-two years. Michigan Gas Utilities' Partello storage field has been in operation for fifty years. The Peoples Gas Manlove storage field has been in operation for fifty years and has an estimated remaining book life of forty-four years, for an estimated total life of ninety-four years.

Accordingly, the economic evaluation conservatively assumes a sixty-year remaining life for Bluewater and assumes full recovery of the capital investment for purchasing Bluewater and recovery of all ongoing capital and operating costs incurred over that time period.

The annual costs are reflective of a gas year, which is from April 1 to March 31. For example, Gas Year 2017/18 is from April 1, 2017 to March 31, 2018.

3.0 Discount Rate

4.0 Storage Service Assumptions

The Base Case and Alternative Case assume that the storage service provided by Bluewater is service (i.e., Maximum Daily Withdrawal rights are equal to of Maximum Storage Capacity). This level of service meets the firm supply portfolio requirements for the Gas

Utilities and is compatible with the operating characteristics of the Bluewater storage facility. Table 2 provides the total storage capacity that the Gas Utilities have under contract at Bluewater for gas year 2016/2017 and 2017/2018 with the withdrawal requirements for those contracts. This indicates the Bluewater storage facility has been, on average, contracted as a [REDACTED] service storage facility.

Table 2

Gas Year	MSQ (Dth)	MDWQ (Dth/day)	Days of Service
2016/2017	[REDACTED]	[REDACTED]	[REDACTED]
2017/2018	[REDACTED]	[REDACTED]	[REDACTED]

In order to create an “apples to apples” comparison, the Alternative Case is also based upon a [REDACTED] service type in developing the economic comparison to the Base Case.

5.0 Escalation Rates

Escalation rates are used to forecast costs throughout the study period. Escalation rates are used for forecasting O&M costs, capital expenditures (“CAPEX”), storage and transportation rates, park and loan contract costs, and opportunity revenues associated with the Bluewater storage field.

O&M/CAPEX Cost Escalator

This escalator is based on the rate of change of Producer Price Index (PPI) as published by the US Bureau of Labor Statistics and Construction Cost Index (CCI) as published by Engineering News-Record (ENR). The escalators and their relevant data sets include the following:

- PPI data for “Support Activities for Oil and Gas operations” reveals a 20-year average rate of change to the PPI of 3.1 percent, a 10-year average of 2.2 percent, and a recent 5-year average of 2.0 percent.
- PPI data for “Other Pipeline Transportation” reveals a 12-year average rate of change of 4.4 percent, a 10-year average rate of change of 4.8 percent, and a 5-year average rate of change of 4.7 percent.
- The CCI is applicable to capital infrastructure projects and tracks the change in price for a specific combination of construction data from various cities across the United States. A review of a 20-year historical average reveals the average annual change to the CCI was 3.0 percent, the ten year average was 3.3 percent, and the five year average was 2.7 percent.

Based upon these datasets, which depict a long term rate of change slightly higher than 3.0 percent per year and a short term (5-year) rate of change ranging between 2.0 percent and 4.7 percent, the escalation of O&M and CAPEX costs was approximated at a [REDACTED] percent annual growth rate.

Gas Cost Escalator for Seasonal Spreads

The gas cost escalator in this analysis is used to escalate park and loan contract costs/revenues and opportunity sale revenues, which are described in more detail in Section 6.1 below. These costs and revenues are based on the seasonal spreads of the natural gas prices. As natural gas prices increase over time it is assumed these spreads increase, but not necessarily at the same annual growth in the natural gas forecast.

The 2016 Annual Energy Outlook (AEO) provides 30-year forecasts for natural gas prices based on specific data and circumstances for eight unique planning futures. The Reference Case of the 2016 AEO reveals an average escalation rate of 4.3 percent over 30 years. The lowest 30-year average escalation is 1.8 percent and pertains to AEO's "High Oil and Gas Resource and Technology" scenario. The highest 30-year average is 7.5 percent and pertains to AEO's "High Oil Price" scenario. The average escalation for all eight AEO natural gas price forecasts is 4.8 percent.

As discussed in the Application, seasonal variability in natural gas prices is expected to remain, which results in value for opportunity withdrawal revenues. To capture this expected variability, the Gas Utilities conservatively used a lower annual growth rate than shown for AEO's natural gas price forecasts. The escalation rate used for park and loan contract costs/revenues and opportunity withdrawal revenues was approximated at a [REDACTED] percent annual growth, which is comparable to the low end of the average annual growth rate described above.

Storage & Transportation Rate Escalator

The costs associated with storage and transportation services are derived based on both market conditions and costs to serve. The Gas Utilities contract for these services with providers through both cost-based and market-based FERC tariffs. As referenced in the Application, the demand for storage is increasing, demand for natural gas is increasing, and increases in overall costs to operate and maintain storage facilities are likely, primarily due to asset modernization and PHMSA requirements. Increases in market-based rates will be driven by increases in demand and increases in the value of storage, which are also driven by the long-term natural gas price forecasts.

Cost-based tariff rates generally increase when providers file for a rate case with FERC. Typically those filings are not annual and do not reflect a uniform cost increase from year to year but follow a more stair step increase overall. ANR recently filed for an increase in transportation rates, including an 89% increase in its FTS-1 rates. ANR ultimately settled with its shippers on a 35 percent rate increase with three-year stay out and five-year comeback provisions.

It is noteworthy that ANR did not request an increase in storage rates in its recent rate case. This, coupled with the fact that costs to operate storage assets are projected to increase due to modernization and compliance costs could well lead to near term storage cost increases on the ANR system after the current 3-year stay out provision has expired.

Increasing costs for both storage and transportation providers, driven by escalation in O&M expense and CAPEX, as well as increasing storage service demand, will exert upward pressure on market-based storage and transportation rates. To reflect this upward pressure, the economic analysis uses an annual escalation rate of [REDACTED] percent for these services.

6.0 Base Case

As discussed in the Application, the Project would provide the Gas Utilities with up to 23.2 Bcf of working gas storage capacity and the rights to transportation services with Vector Pipeline for withdrawal and injection requirements. All costs and revenues are then allocated to each gas utility based on its share of Bluewater storage capacity and associated firm transportation on Vector.²

6.1 Storage

WEC will purchase the equity of BGH. The total cost of acquisition is \$230 million. While the Gas Utilities will not directly acquire BGH, they will lock in long term access akin to ownership. This analysis thus mimics the scenario in which the Gas Utilities purchase the storage facility (or an owning entity) and recover their required return on and of investment over the assumed sixty-year life of the asset. The analysis assumes that the Gas Utilities [REDACTED]

² The allocation of the total capacity is approximated based on a ratio of peak day sales for each LDC. This equates to WPS having 25 percent, WE having 35 percent, and WG having 40 percent of the total Bluewater capacity.

Table 3 provides a summary of the existing Bluewater storage capacity the Gas Utilities have under contract and the incremental capacity they could assume as third party contracts expire.³

Table 3

A large rectangular area that has been completely redacted with a solid black fill, obscuring the data presented in Table 3.

The Base Case includes the costs of ownership for the Gas Utilities over the assumed sixty-year remaining life of the asset. This includes all costs and revenues associated with continued operation of Bluewater. These cost components are described below.

Capital Investment:

The analysis assumes that the \$230 million acquisition cost is recovered over the assumed sixty-year book life of the asset. The acquisition cost is allocated to each Gas Utility as shown in Table 4.

³

A series of seven horizontal black bars of varying lengths, indicating that the content of the footnote has been redacted.

Table 4

WPS	
WE	
WG	
Total	\$230,000,000

114

The base gas, valued at \$[REDACTED] is included in the purchase price. The accounting for the base gas assumes [REDACTED] percent is non-recoverable and gets depreciated. The remaining [REDACTED] percent is assumed to be recoverable, is capitalized and receives a return on investment but does not get depreciated.

Fixed O&M/CAPEX:

Fixed O&M and CAPEX are combined together as one cost stream. As shown in Table 6, Bluewater's average combined fixed O&M and CAPEX costs from 2013 through 2015 were approximately \$█ million per year. Adders were then applied to the estimate based on due diligence to account for all costs. These adders include an adjustment for

an internal insurance premium, an estimate for administration and general costs, and inflation.

Table 6



The Base Case assumes the fixed O&M and CAPEX costs will be approximately \$[REDACTED] million per year, in 2016 dollars, and will escalate annually using the O&M/CAPEX escalator.

Property Taxes:

Property taxes are a function of the assessed value of the property and the millage rate. Bluewater's property taxes for the past three full years (2013 through 2015) have been on average \$[REDACTED] million per year. However, the current assessed value is lower than the purchase price, which is equivalent to the book value of the Bluewater's storage facilities. The assessor has the ability to change the assessed value to the fair market value for tax purposes reflecting the purchase price. The Gas Utilities conservatively assume this will occur and the property taxes would therefore increase. Based on the purchase price, the fair market value of Bluewater, less base gas, would be \$[REDACTED] million. Figure 2 indicates the estimate of property taxes for the first 20 years of operation. After year 15 the property taxes are conservatively assumed to remain flat.

Figure 2

Existing Storage Costs and Revenues

The Gas Utilities currently have existing storage contracts with Bluewater. The value of those contracts (at current contracted rates) is included in the evaluation until they expire. In addition, once WEC owns 100 percent of the equity in Bluewater all of the storage revenues received from all existing contracts, including those of the Gas Utilities, will flow back to the Gas Utilities via the true-up mechanism, which is also included in the evaluation. The cost of existing contracts is therefore a net zero to the Gas Utilities because they would pay Bluewater their contracted reservation fee but would then in turn receive that back via the true-up mechanism.

Avoided Balancing Costs

Within their respective pipeline service portfolios, each of the Gas Utilities has contracted for a maximum daily quantity (MDQ) of no-notice service from one or more pipelines⁴. The principal purpose of this service is to provide the Gas Utilities with an added capability, a buffer, for use in daily supply balancing. For most pipelines the no-notice service provides a conduit by which variances between actual city gate deliveries and nominated deliveries can be reconciled between the pipelines and the Gas Utilities. For the most part, these types of flow variances are caused by unanticipated temperature swings and transport customer supply-demand imbalances.

⁴ On ANR this is defined as No-Notice Service (NNS). On Guardian Pipeline it is referred to as Load Balancing Service (LBS).

With respect to transportation customer variation, city gate supply balancing is best managed through proactive flow control and the Gas Utilities' transport service tariffs supported by storage and no-notice services.

With respect to utility sales service load variation, the Gas Utilities' obligation to serve relegates supply-demand balancing to the Gas Utilities swing supply portfolios. Those portfolios are comprised of firm storage, winter term swing contracts (calls), and seasonal no-notice service. Because winter term swing supply is limited to business-day-only nomination cycles and is not "recoverable" once used, and because no-notice service typically requires an assigned firm storage service account and adds fixed costs, firm storage using intraday nomination rights to adjust nominations to actual deliveries can be used to displace a portion of no-notice balancing services. To the extent that incremental storage can effectively replace winter term swing supply, the Gas Utilities believe that an accompanying reduction to the no-notice service entitlement may be warranted and could reduce gas costs.

In consideration of Bluewater's partial displacement of previously targeted winter term swing supply MDQ and enhanced annual injection capability, the Gas Utilities evaluated their respective ANR and Guardian no-notice service levels. As discussed in the Application, this provides the ability for the Gas Utilities to reduce the amounts of these services they currently purchase. The following describes the gas cost savings (in the form of cost avoidance) included in the economic analysis:

- WPS: Currently contracted Guardian Load Balancing Service (LBS) was "levelized" at [REDACTED] Dth/day for injections and withdrawals while contracted ANR no-notice service (NNS) was held constant in order to continue to meet operational balancing requirements. Beginning in 2018 this is estimated to produce \$[REDACTED] in annual fixed gas cost reductions (2016\$) which is approximately [REDACTED]% of WPS' current LBS annual fixed charges.
- Wisconsin Gas: Correlated to the WPS winter peak day requirement and combined no-notice service levels, currently contracted ANR NNS was slightly reduced in terms of the winter MDQ with a larger reduction to the summer contract MDQ. Beginning in 2020, this is projected to produce \$[REDACTED] in annual fixed gas cost reductions (2016\$) which is approximately [REDACTED]% of WG's current annual NNS fixed cost.
- Wisconsin Electric: Also correlated to the WPS winter peak day requirement and combined no-notice service levels, currently contracted ANR NNS was reduced in

both the winter and summer. Beginning in 2020, this is estimated to produce \$[REDACTED] in annual fixed gas cost reductions (2016\$) which is approximately [REDACTED]% of WEGO's current annual NNS fixed cost.

Taken together, the recommended no-notice service reductions resulting from the acquisition of the more flexible and operationally available Bluewater storage service will result in an annual fixed gas cost reduction of \$[REDACTED]. While operational experience with the proposed Bluewater storage service level will ultimately dictate the degree to which the Gas Utilities can reduce their current pipeline no-notice services, the Gas Utilities are confident in this approach and therefore anticipate reducing no-notice service MDQs as the existing Guardian and ANR no-notice service contracts come to term.

Park and Loan

Each year suppliers agree to "park and loan" transactions with Bluewater to supply it with 3.4 Bcf of gas that the facility needs throughout the winter months in order to fulfill withdrawal obligations for firm storage contracts. This quantity of natural gas is then redelivered to the suppliers, typically in the May to July time period.

The value to Bluewater of the park and loan contracts is based on the spread between the forward August to October price and the following gas year's forward price for May to July months. In addition to the spread, the overall value of this transaction typically will include a deduction to cover the supplier's cost of money for the months the natural gas they own is parked in Bluewater's storage field. The value of these transactions to Bluewater can be in the form of either a cost or revenue depending on the relationship between the spread and the supplier's carrying charge. In this analysis, the long term value of the park and loan contracts is conservatively forecast to be on average a cost of \$[REDACTED] using monthly forwards for the Dawn Hub as of October 31, 2016.⁵ The cost for park and loan contracts is then escalated after year 9 based on the gas cost escalator. This forecast is conservative because it does not reflect instances when park and loan arrangements generate net revenues. Under their long-term contracts, the Gas Utilities will be responsible for the cost and revenues associated with park and loan gas.

⁵ This figure accounts for inflation after year 9.

Ownership Optimization and Opportunities

WEC's ownership of the Bluewater storage field will yield opportunities for the Gas Utilities to optimize their gas supplies in ways that are not available with leased storage, where knowledge as to the storage fields' real-time and forward-looking capability is limited and the lessee's injection and withdrawal activity restricted by contract. In addition, Bluewater has operating characteristics that will enable the Gas Utilities to realize these opportunities. These characteristics include, but are not limited to the following:

- Unique geographical proximity to the expanding Marcellus and Utica shale gas production region along with short-haul, pipeline access to both the Dawn and Joliet gas supply hubs; the latter interconnected with existing downstream pipeline capacity delivering to the Gas Utilities city gates.
- High withdrawal characteristics to take advantage of periods of higher natural gas prices particularly during in the winter season. With 100% ownership the Gas Utilities will not have to abide by contractual ratchets. They will have the ability to withdraw more gas than originally planned without penalty.
- High injection characteristics allowing the Gas Utilities to take full advantage of purchasing gas throughout the year, including during the winter, when natural gas prices are depressed. Having ownership of the field would not restrict the Gas Utilities to injections up to a contractual MDIQ.
- The Kimball storage field, which is part of the Bluewater storage facility, provides the ability for the Gas Utilities to optimize the daily operations of the total storage facility. Kimball has the ability to be regularly cycled and does not need to be utilized at the same time as Columbus. The Gas Utilities will have the ability to withdraw from Kimball at the same time as the Columbus field, or hold back withdrawals from the Kimball field until later in the winter season when the withdrawal capability for other storages are typically reduced (ratcheted-down).

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Peoples Gas Light (“PGL”), which is a part of the WEC Energy Group, has realized opportunities in this manner to the benefit of its sales service customers. For example, during the winter of 2013-14 (aka “Polar Vortex”) PGL’s Manlove storage field was able to withdraw additional working gas and a portion of base gas and ultimately generated approximately \$[REDACTED] in savings which were subsequently passed-on to PGL’s customers through its purchased gas adjustment mechanism. Only through PGL’s direct ownership of the Manlove storage field was PGL able to take advantage of this opportunity while continuing to meet the gas supply needs of its connected customers.

The Gas Utilities also anticipate gas cost savings through the proactive management of planned injection and withdrawal plans supporting each of the Gas Utilities’ own working storage requirements. In order to provide for a timely inventory fill and draw-down the Gas Utilities develop, with the intent to fully execute, advance detailed summer injection (fill) and winter withdrawal (draw-down) operating plans. The operating plans take into account the following as key drivers:

- Projected average customer demand under normal temperature conditions
- Projected peak and minimum customer demand requirements/timing
- Term (firm) base load and swing supply portfolio requirements
- Storage inventory goals (e.g. targeted fill level)
- Contract and tariff rights governing firm their transport and storage services

In their operating plans, the Gas Utilities seek to meet sales demand, service and supply contract obligations, and storage inventory goals in a manner that provides a measure of flexibility in the very likely event that demand and supply forces vary from the plan. Forward gas pricing, which can be quite volatile, is for that reason taken as an input and not a driver. However, once the operating plan is set (or reset due to actual supply operations), forward gas prices occasionally provide opportunities for the Gas Utilities to capture/avoid comparably favorable/unfavorable price differential by adjusting planned monthly storage injection/withdrawal targets given its transport and storage service rights.

Depending on comparable gas price relationship over a given period of time, the benefit of these opportunities can be “locked-in” with some combination of physical and/or financial transactions. For example, starting-out with a typical flat month-to-month

summer injection plan and a flat or “carry”⁶ summer price curve, the extent to which planned injections can be accelerated, or moved from an out-month to a nearer month when gas commodity prices are comparably lower, allows the Gas Utilities to capture the price benefit of the nearby month.

The opportunity to capture these benefits and their amount depends on the Gas Utilities’ ability to adjust current and forward period gas flows as prescribed by their respective storage and transport services portfolios. Ownership of a storage field as flexible as Bluewater provides the Gas Utilities with enhanced injection and withdrawal capacity, over which each utility would have direct control.

For these reasons, direct ownership of a storage facility with the capability of the Bluewater storage facility can provide the Gas Utilities with significant operational advantages over that of leased storage, all to the gas cost benefit of its Wisconsin customers. Given the regional proximity of their respective service areas to that of PGL, the Gas Utilities’ have assumed for economic evaluation purposes an opportunity sale value using the actual savings Manlove experienced during the Polar Vortex as a proxy for the calculation. To do this

[REDACTED]

[REDACTED] That said, the Gas Utilities’ have elected a conservative approach of not assuming additional savings with regard to proactive management of planned injection and withdrawal plans stated above.

Oil Revenue

During the operation of Bluewater’s reservoirs for natural gas storage, the withdrawal of natural gas from the storage field can generate small amounts of oil residuals. As has been true in the past, there is the potential for Bluewater to experience a small amount of revenue from the sale of this byproduct oil. However, over the last couple of years

⁶ Month-to-month commodity pricing (differential) that is a function of the financial cost to carry one (1) Dth of gas in inventory for the specified duration (carrying period of a month or months).

⁷

[REDACTED]

the oil revenues have declined significantly and Bluewater does not appear to have generated any oil revenues in 2016. For this reason, additional oil revenue was not included in the economic evaluation.

6.2 Transportation

In addition to the storage service to be contracted pursuant to the Project, the Gas Utilities will require firm pipeline transportation (FT) capacity for storage injections and withdrawals. The transportation capacity required to transport natural gas to and from Bluewater storage is on Vector Pipeline, as shown in Figure 2 in the Application, and provides access to two very liquid trading hubs: the Joliet Hub in Illinois and the Dawn Hub in Ontario. The withdrawal path needed on Vector is from Bluewater to Joliet, where Vector connects with Guardian Pipeline. The natural gas is then delivered to and from gas customers in Wisconsin via Guardian.

The Gas Utilities will have the ability to secure sufficient firm transportation on Vector at negotiated rates for up to 20 years with negotiation rights for extension upon expiration. The Base Case assumes that firm transportation capacity on Vector will be utilized for 100 percent of the associated injection and withdrawal requirements.⁸ That means the Gas Utilities will have the ability to secure the necessary transportation capacity for the life of the Bluewater facility for both withdrawals and injections. The Vector contracts would also allow the Gas Utilities to inject gas into storage from both Joliet and Dawn. This flexibility provides greater confidence of adequate supply for injections, and also provides the ability to arbitrage the price differential between these two hubs to optimize the cost of natural gas for the benefit of customers.

Withdrawal Capacity:

Assuming [REDACTED] storage service, the Gas Utilities will need to secure up to [REDACTED] dth/d FT on Vector (from the Bluewater facility to Guardian). The Gas Utilities propose to utilize a combination of their existing transportation capacity on Vector and new contracts for the remaining FT on Vector to meet these needs. This also includes the Vector Canada capacity noted in Attachment 3 to complement the Vector US capacity.

Wisconsin Electric and Wisconsin Gas currently have contracts for approximately [REDACTED] dth/d of existing FT capacity on Vector to deliver natural gas from the Bluewater facility

⁸ In addition to utilizing Vector, a portion of the injection on Vector from Joliet to Bluewater for both the Base Case and Alternative Case (Bluewater and/or Washington 10) is assumed to be supplied from Milford to Storage via DTE Gas pipeline since NEXUS and Rover currently hold the capacity on that segment of Vector.

to Guardian. These contracts expire after the 2019/20 gas year. Vector has agreed to provide increased withdrawal FT capacity as additional Bluewater storage comes available to the Gas Utilities. The total new FT needed for withdrawals follows the same “New Bluewater Storage” capacity as shown above in Figure 1. The total FT needed with Vector over the next 20 years for the incremental Bluewater storage is summarized below in Figure 3.

Figure 3



The rates negotiated with Vector for the 20 year contract for withdrawal capacity can be found in Attachment 3, “Firm Transportation Arrangements.” The economic analysis assumes that, after the twenty-year contract term, the transportation rates would then be equal to the Vector transportation rate assumed in the Alternative Case, which includes a [REDACTED] percent escalation rate.

Injection Capacity:

As stated above, the Gas Utilities plan on diversifying their source of natural gas by utilizing both the Joliet Hub and Dawn Hub. Based on a 175-day injection period⁹ the Gas Utilities will need to secure up to [REDACTED] dth/d of Vector FT. Unlike the

⁹ The 175-day injection period is consistent with ANR’s MDIQ and established inventory injection guidelines.

withdrawal capacity, the Gas Utilities do not have existing FT contracts for injections. Therefore, all injection capacity with Vector would be “New FT”.

The total FT needed for injections with Vector over the next 20 years is summarized below in Figure 4, which includes FT capacity sourced from both Joliet and Dawn. The Gas Utilities are planning to secure more capacity on Vector with natural gas sourced from Dawn to take advantage of the lower FT rate for the shorter distance injection path from Dawn to Bluewater as compared to sourcing natural gas from Joliet¹⁰. Historically, the basis differential has been higher for natural gas purchased at Dawn compared to Joliet. However, a majority of that differential is experienced during the withdrawal season (winter months) as compared to the injection season. Also, both Nexus and Rover plan on flowing low cost shale gas from Appalachia to the Dawn Hub; as a result, the forecasted differential between Dawn and Joliet is expected to decrease.

Figure 4



Full detail on terms and conditions and the negotiated rates with Vector for the 20-year contract for injection capacity can be found in Attachment 3, “Firm Transportation Arrangements.” After the 20-year contract term ends, the transportation rates are

¹⁰

[Redacted footnote content]

assumed to be equal to the Vector transportation rate assumed in the Alternative Case, which includes a [REDACTED] percent escalation rate. Table 7 provides the transportation rates (\$/dth/d) for the Base Case from gas year 2018/19 to 2038/39. After that period the rates continue to escalate through the end of the study period.¹¹

Table 7



7.0 Alternative Case

The Alternative to the Base Case would be to continue to contract for storage and required transportation for delivery to Guardian on shorter terms. The costs of storage service in the Alternative Case are based on a continuation of the near- to intermediate-term contracts that

¹¹ Starting the gas year 2018/19, NEXUS and Rover have all the rights to the FT capacity on Vector from Milford to Dawn. The rates for that year include FT on Vector from Joliet to Milford and FT on DTE Gas from Milford to Bluewater.

the Gas Utilities have traditionally used. The Alternative Case assumes the same quantities of storage and transportation and the same portion of the Gas Utilities' existing term swing supplies would be converted to firm storage service as in the Base Case. In addition, consistent with the Base Case, the Alternative Case also assumes that all of the storage contracts would be for a [REDACTED] annual service.

When existing contracts expire there is no guarantee the continuation of that same storage quantity, whether on MSQ or MDWQ, will be with the same storage provider, even if there are ROFR rights tied to that contract. The Gas Utilities will continue to use the RFP approach with multiple providers to maximize the value of storage and transportation contracts going forward.

7.1 Storage

As discussed previously, the Gas Utilities have storage contracts that are subject to both cost-based rates (*i.e.*, the services acquired from ANR) and market-based rates (*i.e.*, the services acquired from DTE at Washington 10 and at the Bluewater Gas Storage facility). This near- to intermediate-term contracting approach results in uncertainty in shorter-term storage rates in the future. As discussed in the Application, there will be upward pressure on storage rates for both market-based and cost-based storage as demand increases for natural gas commodity and storage. Since there is no guarantee existing contracts will be with the same provider after expiration, and since the Gas Utilities contract for storage through both cost-based and market-based storage with delivery to Guardian, the Alternative Case assumes all storage capacity is priced at the average of the market-based and cost-based rate forecasts.

Historic Storage Rates:

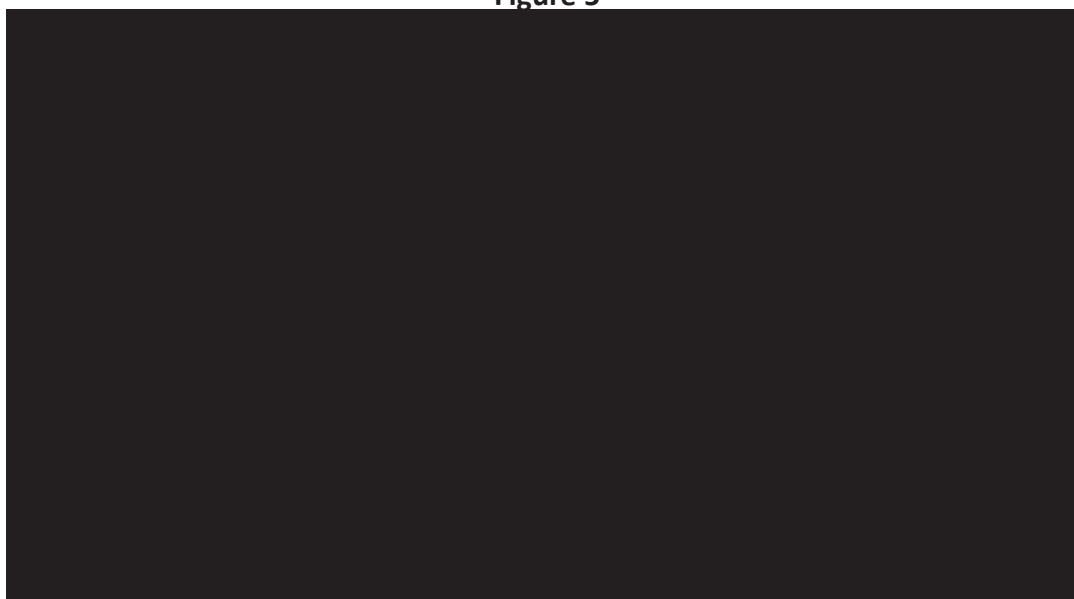
Figure 5 provides the average annual cost per dth of MSQ paid by the Gas Utilities for storage services over the past nine years. As shown, the Gas Utilities' contracts with ANR for cost-based storage service have remained relatively flat, at or near ANR's maximum tariff rate for [REDACTED] storage service over that time¹². The rate for ANR storage has remained relatively flat because the rate at which ANR is permitted to sell its storage services is capped at the maximum cost-based rate approved by the FERC, regardless of the value of storage service in the market. Conversely, the price paid by

¹² The graph includes comparisons between cost-based and market-based rates based on [REDACTED] service to provide a more accurate comparison since there were ample contracts with [REDACTED] service to make a useful comparison.

the Gas Utilities for market-based storage service has shown volatility over the same time period as a result of changing market conditions. Market-based storage providers have demonstrated to FERC that they are unable to exercise market power for the sale of their services, and thus are permitted to sell their storage services at whatever price the market will bear when the service is contracted.

As shown in Figure 5, there have been times when the price paid by the Gas Utilities for market-based storage has exceeded the price of the cost-based storage, as well as times when the price has been less than the price of the cost-based storage, which has been in the case in the past few years.

Figure 5



Projected Storage Rates:

Due to (1) the forecasted increase in natural gas demand, (2) the finite amount of existing storage accessible by the Gas Utilities, and (3) analysts' projections for ongoing volatility in natural gas prices and thus the increased value of storage, the Alternative Case assumes that the market-based storage rate will average approximately [REDACTED] of MSQ from the winter of 2017/18 through the winter of 2020/21.

The majority of cost-based storage in the Gas Utilities' portfolios is contracted with ANR. Based on the historic data for the Gas Utilities' cost to contract for ANR storage, the cost-based storage rate is assumed to start at ANR's current maximum tariff rate for annual [REDACTED] storage (*i.e.*, \$[REDACTED]/Dth of MSQ) and remain at that level for three years to reflect the fact that ANR's rates cannot be increased for at least the next three years pursuant to the most recent uncontested rate case settlement. As discussed in the

Application, natural gas storage in general, and older storage facilities specifically, are expected to be under increasing cost pressure in the future associated with safety and environmental compliance and the need for asset modernization, as well as general cost increases due to inflation. While the cost to own and operate storage is projected to increase, cost-based storage rates can only be modified through a FERC rate proceeding.

Because pipeline and storage providers are entitled to file rate cases every year, the Alternative Case assumes that storage rates increase annually at percent beginning in 2020, as explained in the Escalation Rate section. Table 8 provides a 20-year summary of the base assumption for storage rates for the Alternative Case.

Table 8

Gas Year	Cost-Based	Market-Based	Average
2017-18			
2018-19			
2019-20			
2020-21			
2021-22			
2022-23			
2023-24			
2024-25			
2025-26			
2026-27			
2027-28			
2028-29			
2029-30			
2030-31			
2031-32			
2032-33			
2033-34			
2034-35			
2035-36			
2036-37			
2037-38			

7.2 Transportation

Since the quantity of storage capacity is the same, the transportation capacity necessary to inject and withdraw natural gas is the same in both cases. As stated above, the storage capacity for the Alternative Case is priced at the average of market-based and

cost-based storage rates. That implies [REDACTED] percent is contracted under a cost-based tariff and [REDACTED] percent is contracted under a market-based tariff. Consistent with that assumption, the transportation path for the Alternative Case utilizes both ANR and Vector for delivery to Guardian at the same ratio assumed for storage capacity, i.e., [REDACTED] percent on ANR and [REDACTED] percent on Vector.

The Base Case also assumes the availability of Vector Canada capacity for additional operational flexibility at BGH. This trait is unique to BGH, so it was not included in the Alternative Case, which assumed that market-based storage services can be contracted from [REDACTED]

Figures 6 and 7 provide a breakdown of the withdrawal and injection capacity required on Vector and ANR for the Alternative Case¹³.

Figure 6



¹³ The portion of Vector injection capacity assumes [REDACTED]
[REDACTED] This is consistent with the Base Case. [REDACTED]
[REDACTED]

Figure 7

The transportation capacity required on ANR's pipeline is priced at ANR's tariff rate for FTS-1 service, or \$ [REDACTED], and is consistent with existing contracts the Gas Utilities have with ANR. This pricing is the same for the injection and withdrawal requirements. ANR has a three year stay out provision in its recent settlement of its FERC rate case. In the analysis it is assumed this price will remain at \$ [REDACTED] for the first three years. After that the transportation rate will escalate at the base escalation rate of [REDACTED] percent.

The transportation capacity required on Vector's pipeline uses the same starting price that was negotiated for the 20-year deal in the Base Case. However, given the Alternative Case is a continuation of shorter term contracts, there is no guarantee the rates shown in the Base Case could be realized in the Alternative Case over the same 20-year period. Given that uncertainty, the starting price is the same for both injection and withdrawal but the base escalation rate, [REDACTED] percent, is applied beginning in year 2 of the analysis.

Table 9 provides the transportation rates (\$/dth/d) assumed in the Alternative Case from gas year 2018/2019 through 2038/2039. After that time period the rates continue to escalate through the end of the study period¹⁴.

Table 9



8.0 Alternative Economic Scenarios

In addition to the base assumptions described above, the Gas Utilities tested the economics of the Project by looking at alternative planning futures.

¹⁴

[Redacted footnote content]

Base Priced Future – This planning future is based on the base assumptions described above and reflects all of the market conditions described in the Application. This planning future is viewed as the most likely scenario.

Low Priced Future – This planning future reflects lower forecasted costs for continued operation of storage and pipeline facilities. In this scenario, the asset modernization and PHMSA requirements are much more relaxed and as a result the storage rates for cost-based storage and transportation capacity in the future are lower than expected. In addition, the demand for storage does not increase as expected in part due to less natural gas generation coming online in the near future and decreased seasonal volatility. As the demand for storage in general decreases from expectations the price for market-based storage will also be lower than expected. In order to reflect these factors, O&M/CAPEX, transportation rates, and storage rates escalate at [REDACTED] percent annually. This is reflective of the low end described above in the Escalation Rates section. The gas cost escalator for seasonal spreads also is lower due to less gas price volatility than expected and reflects only a [REDACTED] percent escalation rate.

High Priced Future – This planning future reflects higher forecasted costs for continued operation of storage and pipeline facilities. The costs to perform asset modernization and comply with PHMSA requirements are greater than expected. Natural gas price volatility is greater, demand for storage continues to increase, and new storage fields are developed to meet this demand. The market-based rates are reflective of this “cost of new entry” and capture higher reservation rates. In order to reflect these factors, O&M/CAPEX, transportation rates, and storage rates escalate at [REDACTED] percent annually, reflective of the high end described above in the Escalation Rates section. The gas cost escalator for seasonal spreads also is higher due to more gas price volatility than expected and reflects a [REDACTED] percent escalation rate.

9.0 Results

The Project provides a long-term hedge that is projected to substantially mitigate costs to customers over the longer-term, generating significant savings over the life of the asset. The results of the economic evaluation of securing for the Gas Utilities and their customers long-term access to Bluewater storage and transportation on Vector are shown in the appendix to this attachment. The results can be summarized as follows:

1. The Project results in total long term storage and transportation NPV savings of [REDACTED] [REDACTED] to the Gas Utilities and their customers over the life of the asset compared to the Alternative Case. The range of NPV savings from the Project is

██ compared to the Alternative Case.

2. The annual cost of the Base Case becomes lower cost than the Alternative of continued shorter term lease arrangements as soon as 2022 and then continues throughout the life of the Project.
3. The Project includes a capital investment in the purchase of BGH. As with all capital investments the first year revenue requirement (return on and of investment) will be the highest and then it will decrease over time as the asset is depreciated. The first year rate impact to the typical residential customer who uses 800 therms/year is ██████████ ██████████ depending on the utility, which equates to between a ██████████ ██████████ in their utility bill for the year. Each utility's annual impact is different and dependent on the their capacity off-take with BGH but by the fourth gas year and through then end of the study period all three utilities have an annual net rate decrease from the previous gas year compared to the Alternative.

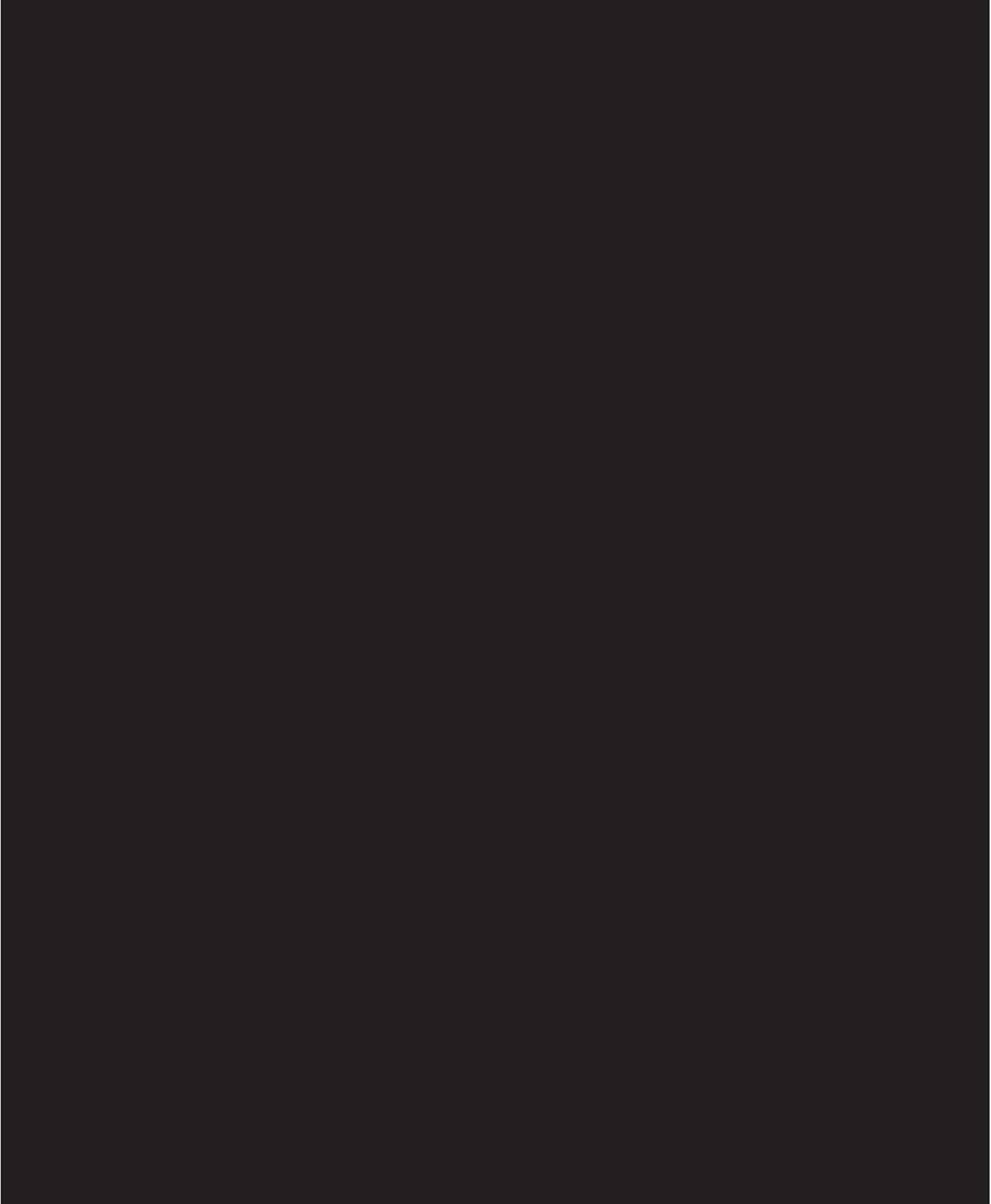
The Transaction will (a) provide long-term rate certainty, (b) mitigate the Gas Utilities' exposure to significant increases in future storage costs, and (c) enable the Gas Utilities to lock in low cost firm transportation capacity. The recently settled ANR rate proceeding, resulting in a 35% increase in ANR's firm transportation rates, has greatly increased the delivered storage cost (*i.e.*, the storage cost plus associated transportation) to the Gas Utilities.¹⁵ The opportunity to diversify a greater portion of the Gas Utilities' transportation and storage portfolio away from ANR results in substantial long-term firm transportation capacity cost savings.

However, the timing is critical. The significant increase in demand for natural gas developing in this region, and the construction of the proposed new transportation paths from the Appalachia basin, will impact the value, use and availability of the Vector pipeline. Failing to secure long term access to Vector now could result in the loss of the significant savings associated with this proposal.

¹⁵ Including instances where ANR storage volumes are delivered on its system into Guardian for the Gas Utilities' re-delivery to the city gate. An uncontested settlement in ANR's current rate proceeding (RP16-440) is currently pending approval at FERC.

Appendix to Attachment 5











Attachment 6

Proposed Changes to WEC AIA

WEC ENERGY AFFILIATED INTEREST AGREEMENT

This WEC Energy Affiliated Interest Agreement ("Agreement") is entered into this 31st day of March, 2017~~6~~, by and among WEC Energy Group, Inc. and its subsidiaries.

RECITALS

- A. To optimize efficiencies and economies of scale, the Parties desire to plan and operate certain aspects of their businesses with the integration of certain activities by sharing, providing, transferring, and receiving certain services, employees, properties, goods, assets, information systems, rights, and anything else of value.
- B. The Parties intend that this Agreement will establish the terms, conditions, and procedures under which they will achieve the objectives of Recital A, subject to the jurisdiction of the Commissions and FERC and subject to applicable state utility and federal energy law.

NOW, THEREFORE, in consideration of the covenants and agreements set forth in this Agreement, the Parties agree as follows:

Article I **Definitions**

1. "Commissions" means the ICC, MPSC, MPUC, and PSCW; any one of the Commissions is a "Commission" and, as determined by the context in which the term is used, will mean the Commission having jurisdiction over the retail rates of the Regulated Party.
2. "Damages" has the meaning ascribed to it in Section VII.1.

3. "FERC" means the Federal Energy Regulatory Commission or any successor to that agency.
4. "ICC" means the Illinois Commerce Commission or any successor to that agency.
5. "Indemnified Party" has the meaning ascribed to it in Section VII.1.
6. "Indemnifying Party" has the meaning ascribed to it in Section VII.1.
7. "MPSC" means the Michigan Public Service Commission or any successor to that agency.
8. "MPUC" means the Minnesota Public Utilities Commission or any successor to that agency.
9. "Non-Regulated Party" means a Party identified on Appendix B and that is not ~~subject to rate regulation by a Commission~~ a Regulated Party.
10. "Parties" means two or more of the signatories to this Agreement.
11. "Party" means a signatory to this Agreement.
12. "Providing Party" means a Party providing Services to another Party, and that other Party is a Receiving Party.
13. "PSCW" means the Public Service Commission of Wisconsin or any successor to that agency.
14. "Receiving Party" means a Party receiving Services from another Party, and that other Party is a Providing Party.

15. “Regulated Party” means a Party identified on Appendix A and that is [either](#) subject to rate regulation by a Commission [or that is a service provider subject to regulation by FERC](#).
16. “Service” and “Services” have the meanings ascribed to them in Article II and Appendix C, Appendix D, and Appendix E.
17. “WBS” means WEC Business Services LLC and its successors and permitted assigns. WBS is a centralized service company as defined by FERC (18 C.F.R. §367.1(7) or any successor to this rule).
18. “WEC Energy” means WEC Energy Group, Inc. and its successors and permitted assigns.

Article II

Provision of Services

1. Subject to the limitations set forth in this Article II and applicable state and federal requirements, any Party may request Services from any other Party. The term “Services” includes any service, good, asset, property, employee, right, interest, and anything of value to the Receiving Party, the provision, transfer or sharing of which could be considered a “contract,” “arrangement,” “service” or other transfer or sharing of “property” or “assets” or other similar designations that, absent this Agreement, could require the approval of one or more of the Commissions as an affiliated interest arrangement (each, a “Service”). The term “Services” is further described in certain appendices to this Agreement as follows:
 - (a) Appendix C describes services that WBS may provide;

- (b) Appendix D describes services that any Party (except WBS, which provides services under Appendix C, and North Shore Gas Company and The Peoples Gas Light and Coke Company, which provide services under Appendix E) may provide; and
- (c) Appendix E describes services for which North Shore Gas Company or The Peoples Gas Light and Coke Company is a Providing Party to any Party or Receiving Party from any Party except WBS from which it receives services under Appendix C, and other requirements applicable to North Shore Gas Company and The Peoples Gas Light and Coke Company.

The terms “provide,” “providing,” “provision of” and the like in connection with a Service or Services include a transfer or sharing of property, assets or employees.

2. Each Party will have the right, at its sole discretion, to refuse to provide any Services requested under this Agreement. There will be no exclusive right or right of first refusal associated with the provision of Services. Receiving a refusal from another Party to a request under this Agreement will not be a prerequisite for any Party to obtain from an independent third party any Service that is or could be provided under this Agreement. Refusals of requests by any Party under this Agreement will not terminate all or any portion of this Agreement.

3. A Providing Party and a Receiving Party may establish and document their expectations and requirements with respect to any particular Service to be rendered under this Agreement.
4. Nothing in this Agreement will require any Regulated Party to take actions that, relative to not acting under this Agreement, it would expect to negatively affect the reliability or quality of utility [or storage](#) services available to the Regulated Party's customers, impede the Regulated Party's ability to provide utility [or storage](#) services to its customers, or increase the costs to its customers of receiving utility [or storage](#) services.
5. If both WBS and another Party may be the Providing Party for a given Service under Appendix C, Appendix D and Appendix E, as applicable, and WBS and the other Party are willing and able to provide the Service, the Receiving Party will determine which Party will be the Providing Party.

Article III **Determining Charges for Services Provided**

1. **Charges for Services.**
 - (a) All Services that any Regulated Party provides to another Regulated Party will be priced at cost, with cost determined pursuant to Section III.2.
 - (b) All Services that any Regulated Party provides to any Non-Regulated Party will be priced at the greater of cost or fair market value, with cost determined pursuant to Section III.2 and with fair market value determined pursuant to Section III.4.

- (c) All Services that any Non-Regulated Party provides to any Regulated Party will be priced at the lesser of cost or fair market value, with cost determined pursuant to Section III.3 and with fair market value determined pursuant to Section III.4.
- (d) Notwithstanding anything else in this Agreement, all Services that WBS provides will be priced at cost, as determined by 18 C.F.R. Part 367, and all Services that WBS receives will be priced at cost, as determined by Section III.2 or III.3, as applicable.
- (e) Any sale or transfer of an asset will be at the Providing Party's net book value.

2. Determining Cost For Regulated Providing Parties

- (a) Labor Cost.
 - i. Each employee of any Regulated Party will report the time spent providing Services in a time reporting system that WBS maintains or that a Regulated Party maintains in accordance with its established accounting procedures.
 - ii. A standard labor dollar hourly rate will be applied to the time reported pursuant to sub-paragraph (a)(i).
 - iii. All appropriate overheads will follow labor costs.
- (b) Equipment Cost. Costs for equipment used in the provision of Services or otherwise provided or transferred will include all operating expenses, applicable overheads, maintenance, depreciation, return on investment

and sales taxes. Transportation and vehicle costs used in providing Services will be determined based on relative total hours or miles of use or on a vehicle loading applied to labor costs, and will include repairs, maintenance, fuel, depreciation, return on investment, and rental expense.

In all cases [when the Regulated Party is regulated by a Commission\(s\)](#), return on investment will be calculated using a return on net assets at a rate equal to the prevailing pre-tax weighted cost of capital authorized by the Commission(s) having jurisdiction over the retail rates of the Regulated Party that provided a Service for which a cost is being determined. [In all cases when the Regulated Party is regulated by FERC, return on investment will be calculated using a return that such Regulated Party uses in its FERC jurisdictional agreements with other Regulated Parties.](#)

- (c) Materials and Supplies Cost. Costs of materials and supplies commonly used across affiliates will be directly determined and charged. All appropriate overheads will follow the assignment of the direct costs. The costs of material will be based on the average unit price, which includes invoice price, and shipping expenses, net of purchase discounts.
- (d) Other Direct Costs. Other direct costs, which include contract labor, contract services, employee reimbursement for meals and lodging and other costs not included in labor, equipment, materials and supplies, will

be either accumulated and billed directly based on actual charges or allocated.

(e) Calculating Total Cost of Service. The sum of the direct and indirect charges calculated in accordance with sub-paragraphs (a) through (d), will constitute the total cost of Services provided.

(f) Cost Records. Each Regulated Party will maintain a cost accounting system to accumulate all costs related to Services it provides on a basis that is adequate to enable the Commissions and FERC to audit and track its actual costs in connection with transactions under this Agreement.

3. **Determining Cost For Non-Regulated Providing Parties.** Costs incurred by a Non-Regulated Party in providing a Service to a Regulated Party under this Agreement will be determined in accordance with accounting standards customarily used by businesses such as those in which the Non-Regulated Party is engaged. Each Non-Regulated Party will maintain a cost accounting system that is adequate to enable the Commissions and FERC to audit and track its actual costs in connection with transactions under this Agreement.

4. **Fair Market Value.** The fair market value of providing a Service under this Agreement will mean the cost the Providing Party determines by making a good faith effort to identify costs in the relevant market for such or a similar Service. If, despite good faith efforts, a Providing Party is not able to determine the fair market value of a Service it provides to a Receiving Party, the fair market value will be deemed to be equal to the Providing Party's cost.

5. **FERC Jurisdiction - [WBS](#).** With respect to any charges imposed by WBS for Services provided under this Agreement that are subject to FERC's jurisdiction, no Party will elect, or cause any affiliate to elect on its behalf, to have FERC review pursuant to Section 1275 of the Energy Policy Act of 2005 (42 U.S.C. § 16462 or any successor law) the allocation of costs for goods and services provided by WBS until the Commissions with jurisdiction to do so have reviewed and taken required actions regarding the affiliated interest transactions and agreements, or amendments thereto, associated with WBS. If the Commissions have not completed review and approval or taken other appropriate action within a reasonable time, then any Party or its affiliate may seek such FERC review after giving the Commissions who have not so acted at least sixty (60) days' prior written notice.

Article IV **Billing and Payment**

1. All billing and payment under this Agreement may occur through electronic means. References to "bills" means accounting information available to the Parties and "pay" means the transfer of cash on the Parties' books, taking any applicable netting into account.
2. Each Providing Party will, for any month in which it provides a Service under this Agreement, make available sufficient detail to each Receiving Party for charges for Services provided in the preceding month and such detail will be the "bill." This detail will permit each Receiving Party [that is regulated by a Commission\(s\)](#) to identify and, for [such](#) a Regulated Party, to classify the charges in terms of the

system of accounts prescribed by the Commission(s) having jurisdiction over the retail rates of the Regulated Party.

3. Each Receiving Party will pay outstanding balances by the end of the month following the availability of detailed information about charges.
4. If a Receiving Party disputes the calculation of any portion of the amount paid, it will work with the Providing Party to resolve the issues and correct the balance in the following month. The Parties involved in such dispute will involve the other Parties in the resolution of the dispute if appropriate.

Article V **Accounting; Records; Reports**

1. Each Regulated Party will keep all its accounts and records in accordance with the relevant requirements promulgated by the Commission(s) [or FERC](#) with jurisdiction. Without limiting the foregoing, each Regulated Party will maintain adequate books and records with respect to all of its transactions under this Agreement and will record the costs to be allocated to the other Parties in appropriate accounts in its general ledger system. Each Regulated Party will maintain internal controls to ensure that it allocates and bills the costs associated with all transactions under this Agreement properly and consistently in accordance with this Agreement.
2. WBS will keep all its accounts and records in accordance with the relevant requirements promulgated by FERC, including 18 C.F.R. Parts 367 and 368 of FERC's regulations or any successor regulations. Without limiting the foregoing, WBS will maintain adequate books and records with respect to all of its

transactions under this Agreement and will record the costs to be allocated to the other Parties in appropriate accounts in its general ledger system. WBS will maintain internal controls to ensure that it allocates and bills the costs associated with all transactions under this Agreement properly and consistently in accordance with this Agreement.

3. Each Regulated Party [that is regulated by a Commission\(s\)](#) will provide the Commissions a copy of WBS' FERC Form No. 60, or such other annual report required by FERC of centralized service companies, contemporaneous with its annual filing of such report with FERC. Each [such](#) Regulated Party will also file with the Commissions, contemporaneous with its annual filing of such report with FERC, the following schedules. These schedules will list all costs incurred by WBS and all costs allocated to all entities to which WBS provides or provided services. In Illinois, these schedules will be filed as supplemental schedules to the annual report to the [Commission-ICC](#) required by Section 5-109 of the Public Utilities Act (220 ILCS 5/5-109), known as Form 21.

- (a) A schedule summarizing the direct and indirect charges for each functional area in Appendix C. The report will present the dollar amounts and percentages charged to each Party as listed in Appendix C, as well as to all other entities that receive direct or indirect charges from WBS for such functional areas.
- (b) A schedule providing a breakdown by subaccount of Account 923, Outside Services Employed. The schedule will aggregate amounts paid to any

one payee in each subaccount. If one subaccount is less than \$250,000, only the aggregate number and amount of all such payments included within the subaccount will be shown. The schedule will include subtotals for each type of service.

(c) A schedule listing each pension and benefit program provided by WBS.

Such listing will be limited to amounts over \$250,000.

(d) A schedule listing the amount included in Account 930.1, General

Advertising Expenses, classifying the items according to the nature of the advertising and as defined in the account definition. If a particular class includes an amount in excess of \$250,000 applicable to a single payee, the schedule will show separately the name of the payee and the applicable aggregate amount.

(e) A schedule listing the amount included in Account 931, Rents, classifying such expenses by major groupings of property, as defined in the account definition of the Uniform System of Accounts in 18 C.F.R. Part 367 of FERC's regulations.

(f) A schedule providing an analysis of Account 408, Taxes Other Than

Income. The report will separate the analysis into two groups: (1) other than U.S. Government taxes, and (2) U.S. Government taxes. The report will specify each of the various kinds of taxes and show the accounts. A subtotal will be provided for each class of tax.

- (g) A schedule listing the amount included in Account 426.1, Donations, classifying such expense by its purpose. The aggregate number and amount of all items of less than \$250,000 may be shown in lieu of details.
- (h) A schedule listing the amount included in Account 426.5, Other Deductions, classifying such expenses according to their nature.

4. Each year by May 1, each Regulated Party [that is regulated by a Commission\(s\)](#) will submit to the person or department designated by its Commission or its Commission's staff reports showing: (i) its charges, as a Providing Party, to any Receiving Party to which it provided Services during the preceding calendar year; and (ii) its payments, as a Receiving Party, for Services received from Providing Parties during the preceding calendar year.
5. Every year there will be an internal audit of transactions under this Agreement for the purpose of testing compliance with this Agreement. Such audit may be either a discrete audit solely of Services under this Agreement or may be an audit of the Services under this Agreement and other affiliated interest service agreements. The internal audit will include, the following: (i) the accuracy of the derivations of costs billed by the Providing Parties; (ii) the determination that the costs billed to the Regulated Parties are priced at the lesser of cost or fair market value, based on the studies and updates required by Section V.6; (iii) the determination that Services provided by the Regulated Parties to the Non-Regulated Parties, except WBS, are billed at the greater of cost or fair market value, based on the studies and updates required by Section V.6; and (iv) the

accuracy of charges billed under this Agreement during the year. The Regulated Parties [that are regulated by a Commission\(s\)](#) will submit a copy of the audit report to the person or department designated by the Commissions or the Commissions' staffs no later than July 1 of each year. The first such audit report will pertain to the period ending December 31 of the year in which this Agreement is effective, and will be due on or before July 1 of the following year. Subsequent audit reports will be due July 1 following the calendar year that is the subject of the audit.

6. At least once every three years, the Parties will conduct a new study of the cost of Services provided under this Agreement, for the purpose of testing compliance with the Agreement and to analyze the market price of Services provided. The Parties will update the study annually. The Services subject to the studies and the updates will be those that a Non-Regulated Party provides or receives and for which a reasonable substitute is widely available in the relevant market. The studies and updates will be completed no later than May 1 of the year following the end of the most recently completed fiscal year covered by the new study or update. The Parties will notify the person or department designated by the Commissions or the Commissions' staffs of the availability of the study and annual update and, if requested, make such available for review at the Commission's offices. The first such new study shall pertain to the period ending December 31 of the year after this Agreement becomes effective, and shall be due on or before May 1 of the year following such December 31.

Article VI
Representations and Warranties of the Parties and Other Obligations of WBS

1. Each Party represents and warrants that:
 - (a) it has the right, power, and authority to enter into and perform its obligations under this Agreement;
 - (b) it has taken all requisite corporate action to approve execution, delivery, and performance of this Agreement, and this Agreement constitutes a legal, valid and binding obligation of each Party enforceable in accordance with its terms; and
 - (c) the fulfillment of obligations under this Agreement will not constitute a material violation of any existing applicable law, rule, regulation, or order of any governmental authority.
2. In its performance of services under this Agreement, WBS: (i) will follow applicable federal and state regulations, including codes and standards of conduct, with respect to the sharing of confidential information it receives from any other Party with another; (ii) will not give one or more other Parties, or any other affiliate within the WEC Energy holding company system, a competitive advantage in relevant markets; and (iii) will not subsidize any other Party and will not cause any other Party to subsidize any of its affiliates.
3. WBS will make readily available to each Commission, FERC and any other governmental or regulatory agency with jurisdiction under applicable law (an “agency”) reasonable access to its books and records (including the basis for its

computation of cost allocations) as may be necessary for each agency to review WBS's transactions with each other Party within such agency's jurisdiction.

Article VII
Liability and Indemnity

1. Each Party (an "Indemnifying Party") will indemnify and save harmless each other Party (an "Indemnified Party") from any and all damages, expenses, claims, costs, attorneys' fees or other injury, including injury to person, life or property, and further including injury resulting in the death of any person or persons ("Damages"), in any manner arising out of or in connection with the willful or negligent acts or omissions of the Indemnifying Party in the performance of this Agreement. If one or more Indemnified Parties is made a party to any suit or litigation on account of any actual or alleged Damages, the appropriate Indemnifying Party or Parties will defend such action on behalf of the Indemnified Party or Parties and, if judgment will be obtained or claim allowed in any of said proceedings against one or more Indemnified Parties, the appropriate Indemnifying Party or Parties will pay and satisfy such judgment or claim in full.
2. EACH PARTY AGREES THAT NO OTHER PARTY WILL BE LIABLE TO IT FOR SPECIAL, PUNITIVE, CONSEQUENTIAL, EXEMPLARY OR INCIDENTAL DAMAGES OR OTHER SUCH LOSSES, DAMAGES, COSTS OR LIABILITIES ARISING FROM ANY CAUSE WHATSOEVER, WHETHER OCCASIONED BY THE NEGLIGENT ACTS OR OMISSIONS OF A PARTY OR ITS EMPLOYEES, AGENTS OR REPRESENTATIVES OR OTHERWISE.

Article VIII
Additional Provisions

1. This Agreement will become effective on the first day of the ~~fiscal quarter~~first month following approval or waivers of the Commissions. Once effective, this Agreement will continue in full force and effect until and unless modified or terminated as provided in this Agreement.
2. The Parties may amend or modify this Agreement at any time by written agreement of all the Parties and, if required, approval or waivers of the Commissions.
3. The terms “include” and “including” in this Agreement are not words of limitation by enumeration but connote that items identified after these words represent a non-exclusive list.
4. The Parties acknowledge that all or portions of this Agreement may be challenged before regulatory agencies or a court of competent jurisdiction by persons or entities not Parties to this Agreement. In such event, the Parties agree that each will use its reasonable efforts before such agencies and courts to support the pursuit and accomplishment of the Parties’ objectives in entering into this Agreement.
5. This Agreement, and any rights under this Agreement, may not be assigned without the prior written consent of all Parties and, if required, approval or waivers of the Commissions.
6. The addition of a Party to this Agreement or the termination of this Agreement as to a Party will not require the approval or waiver of the Commissions, but the Regulated Parties that are regulated by a Commission(s) will give written notice

to the Commissions of changes to Appendix A or Appendix B reflecting the current Parties to this Agreement.

7. Any change to Appendix C or Appendix D will not require the prior approval of the Commissions but the Regulated Parties [that are regulated by a Commission\(s\)](#) will give sixty (60) days' prior written notice to the Commissions of changes to Appendix C or Appendix D.
8. Notwithstanding anything to the contrary in this Agreement, Minnesota Energy Resources Corporation will submit to the MPUC for approval any changes in the Parties to the Agreement or changes in the Services covered by the Agreement, as required by Minn. Stat. § 216B.48. As required by the MPUC's September 14, 1998 Order in Docket No. E,G-999/CI-98-651, such changes will be submitted within 30 days.
9. Any change to Appendix E will be subject to the ICC requirements described in that Appendix E and will not require notice to or filing with any other Commission or FERC.
10. A Party leaving the WEC Energy holding company system may continue to receive Services from any other Party for a reasonable transition period following such departure from the WEC Energy holding company system. Once any such departure has occurred or when the Party has ceased receiving Services, an updated Appendix A or Appendix B will be filed with the Commissions.
11. In providing Services, any Providing Party may arrange, where it deems appropriate, for the services of third party experts, consultants, attorneys,

advisers, or other contractors or agents with necessary qualifications as may be required for or pertinent to the performance of Services for the Parties.

12. Each Party will treat in confidence all information that it may obtain from or regarding the other Parties and their respective businesses during the term of this Agreement. Each Party agrees to protect the other Parties' information using the same degree of care that it uses to protect its own confidential information, and in no event less than reasonable care. Except to the extent disclosure of such information is required by a governmental authority having jurisdiction, such information will not be communicated to any person other than the Parties, and will be shared among the Parties only to the extent certain persons need to know such information in order for the Parties to perform under this Agreement. If a Party is required to disclose confidential information to a governmental authority, such Party will take reasonable steps to make such disclosure confidential under the rules of such governmental authority. Information provided under this Agreement will remain the sole property of the Party providing such information. The requirements of this Section VIII.12 will not apply with respect to information that is or becomes available (i) to such Party from a source other than the Party providing such information, unless such other source has imposed confidentiality restrictions, or (ii) to the public other than as a result of disclosure by such Party or its agents.
13. The Parties agree and acknowledge that any legal advice or legal services provided, or arranged to be provided, by or on behalf of any Providing Party

under this Agreement will be for the direct or indirect benefit or common interest of all of the Receiving Parties. It is the intention of all Parties to maintain all privileges that may apply to any communications related to the provision or receipt of such legal advice or services.

14. The Parties hereby appoint all Providing Parties as their agents to represent them in providing services for or on their behalf under this Agreement. The Parties also authorize all Providing Parties to purchase (*i.e.*, take title to) various commodities, goods and assets in connection with their provision of Services, and to sell (*i.e.*, convey title to) such commodities, goods and assets to the Parties, including to Receiving Parties, in their provision of Service. Any sale of such commodities, goods and assets by Providing Parties to Receiving Parties and any use of such commodities, goods or assets by Providing Parties in the provision of Services will be at the costs incurred by such Providing Parties, to be allocated among the Receiving Parties pursuant to the methodologies prescribed in this Agreement. The Providing Parties will be accountable for all funds advanced or collected on behalf of a Receiving Party in connection with any transaction in respect of which a Providing Party provides Services. A Providing Party's provision of Services will in all cases and notwithstanding anything in this Agreement to the contrary be subject to any limitations contained in authorizations, rules or regulations of those governmental agencies having jurisdiction over a Providing Party or its provision of Services.

15. If any amendment to this Agreement does not receive any approval or waiver by all Commissions that may be required, then the Parties will promptly negotiate in good faith new provisions to restore such amendment, as nearly as possible, to its original intent and effect, and file for approval or waivers of the Commissions.
16. If any governmental or regulatory agency or court of competent jurisdiction holds that any provision of this Agreement is invalid, or otherwise takes action resulting in the impossibility or impracticability of performance of all or a portion of this Agreement, the remainder of this Agreement will not be affected thereby and will continue in full force and effect. In the event any provision of this Agreement is so held invalid, the Parties will promptly renegotiate in good faith new provisions to restore this Agreement as nearly as possible to its original intent and effect, and file for approval or waivers of the Commissions.
17. No course of dealing or course of performance among the Parties will be construed to alter the terms of this Agreement.
18. The Parties agree that there is no third party beneficiary of this Agreement and that the provisions of this Agreement do not impart enforceable rights to anyone who is not a Party.
19. This Agreement will be governed by and construed in accordance with the laws of the State of Wisconsin, without regard to principles of conflicts of law; provided, however, that no Regulated Party [that is regulated by a Commission\(s\)](#) will be required to comply with this Agreement to the extent such compliance would be a violation of the public utility laws of any state(s) in which such

Regulated Party conducts its state-regulated utility operations and no Regulated Party that is regulated by FERC will be required to comply with this Agreement to the extent such compliance would be a violation of the Natural Gas Act or other statute or regulation under which FERC regulates it.

20. This Agreement may be executed in any number of counterparts, each of which when executed and delivered will be deemed to be an original and all of which counterparts taken together will constitute one and the same instrument.

IN WITNESS WHEREOF, each of the Parties has caused this Agreement to be executed on its behalf as of the day and year first above written.

WEC ENERGY GROUP, INC.
[for itself and on behalf of all Non-Regulated
Parties other than WEC Business Services LLC]

WEC BUSINESS SERVICES LLC

By

Name: Allen Leverett

Title: CEO and President

By

Name: J. Patrick Keyes

Title: Executive Vice President ~~and C.F.O.~~

MICHIGAN GAS UTILITIES
CORPORATION

THE PEOPLES GAS LIGHT AND COKE
COMPANY

By

Name: Allen Leverett J. Patrick Keyes

Title: President

By

Name: Charles Matthews

Title: President and CEO

MINNESOTA ENERGY RESOURCES
CORPORATION

WISCONSIN ELECTRIC POWER
COMPANY

By

Name: Allen Leverett J. Patrick Keyes

Title: President

By

Name: Allen Leverett J. Kevin Fletcher

Title: President

NORTH SHORE GAS COMPANY

WISCONSIN GAS, LLC

By

Name: Charles Matthews

By

Name: Allen Leverett J. Kevin Fletcher

Title President and CEO

Title: President

WISCONSIN PUBLIC SERVICE
CORPORATION

UPPER MICHIGAN ENERGY RESOURCES
CORPORATION

By

By

Name: ~~Allen Leverett~~ J. Kevin Fletcher

Name: J. Patrick Keyes

Title: ~~Chairman, President and CEO~~

Title: President

BLUEWATER GAS STORAGE, LLC

By

Name:

Title:

Appendix A Regulated Parties

Bluewater Gas Storage, LLC

a FERC-jurisdictional storage service provider

Michigan Gas Utilities Corporation

a Michigan public utility engaged in the business of providing natural gas service

Minnesota Energy Resources Corporation

a Minnesota public utility engaged in the business of providing natural gas service

North Shore Gas Company

an Illinois public utility engaged in the business of providing natural gas service

The Peoples Gas Light and Coke Company

an Illinois public utility engaged in the business of providing natural gas service

Upper Michigan Energy Resources Corporation

a Michigan public utility engaged in the business of providing electric and natural gas service

Wisconsin Electric Power Company

a Wisconsin and Michigan public utility engaged in the business of providing electric and natural gas service

Wisconsin Gas Company LLC

a Wisconsin public utility engaged in the business of providing natural gas service

Wisconsin Public Service Corporation

a Wisconsin public utility engaged in the business of providing electric and natural gas service

Appendix B
Non-Regulated Parties

WEC Energy Group, Inc. and its subsidiaries not listed on Appendix A or on this Appendix B

WEC Business Services LLC

Appendix C

I. Services that WBS May Provide to Any Party

Subject to the limitations set forth in Section II.1 and applicable state and federal requirements, WBS may provide to any Party the Services described in this Appendix C, Section I.

1. Administrative

“Administrative” means facility management services for owned and leased facilities and grounds. This includes operations and maintenance of structures, capital improvements, interior space planning, printing services, security and janitorial, and acquisition and management of real estate and land rights, including easements and right-of-ways.

Allocation Factors: (1) Square Footage; (2) Number of Employees; (3) Dollars Associated with Number of Imprints; (4) Composite Allocator; (5) Number of Customers.

2. Communications

“Communications” means the preparation and dissemination of information to employees, customers, government officials, the public and the media.

Allocation Factors: (1) Number of Employees; (2) General/Corporate; (3) Number of Customers.

3. Customer

“Customer” means the provision of services and systems dedicated to customer service, including meter reading and billing, credit, collections, customer relations, call center operations, revenue assurance, account management, market research, customer strategy, and claims management. It also includes customer relations planning and compliance, customer contact services (including customer assistance), and managing customer relations subcontractors.

Allocation Factors: (1) Number of Customers; (2) Number of Meters; (3) Call Volume; (4) General/Corporate.

4. Environmental

“Environmental” means the performance of assessments, investigations, remediation and other activities required to ensure compliance with applicable environmental laws and regulations, permitting, licensing, due diligence, waste management, and emergency response.

Allocation Factors: (1) FTE Work Estimate; (2) General/Corporate; (3) MW.

5. Executive Management

“Executive Management” means the executive management and oversight activities

performed by officers and other senior executives of a Party. Such activities include the formulation of general business plans and policies, selection of key management personnel, and allocation of financial resources.

Allocation Factors: (1) General/Corporate.

6. External Affairs

“External Affairs” means administering the Parties’ activities in the areas of governmental relations, community support and economic development, as well as the analysis and formulation of regulatory policy, rate case preparation and rate administration.

Allocation Factors: (1) Total Property, Plant and Equipment; (2) Number of Employees; (3) General/Corporate; (4) Number of Customers.

7. Finance

“Finance” means accounting, finance, treasury, tax, internal audit, risk management, insurance and related financial services. Examples of activities performed within these various financial disciplines includes the following: maintain corporate books and records, prepare financial and statistical reports, process payments to vendors, ensure compliance with tax laws and regulations, manage debt and maintain banking relationships, invest pension assets, establish and monitor internal controls, perform financial and risk analysis, prepare budgets and forecasts, maintain shareholder records, communicate with the investment community, and procure and manage insurance.

Allocation Factors: (1) Number of Transactions; (2) Total Property, Plant and Equipment; (3) Number of Employees; (4) FTE Work Estimate; (5) General/Corporate.

8. Human Resources

“Human Resources” means the establishment and administration of policies and assuring compliance with legal requirements in the areas of employment, compensation, benefits and employee health, safety, and wellness. It also involves providing payroll and employee benefit and workers’ compensation administration, employee training and development, recruiting and staffing services, employee communications and labor relations management. It further includes “Compliance,” which means, to the extent not covered by other Services, establishment and administration of policies to support compliance with laws, ethics, and corporate code of conduct and other corporate policies.

Allocation Factors: (1) Number of Employees; (2) General/Corporate.

9. Information Technology

“Information Technology” means telecommunications and electronic data processing services such as computer operations, software development and maintenance, network support, end-user support, database administration and information

systems security. It also includes infrastructure and application architecture services, website and hosting services, and disaster recovery services.

Allocation Factors: (1) General/Corporate; (2) Number of Employees; (3) Application Allocator; (4) CPU and Disk Storage; (5) Number of Devices; (6) Number of Meters; (7) Number of Customers.

10. Legal and Governance

“Legal and Governance” means the provision of all types of legal advice and related services involving legal services related to corporate and commercial activities, contracts, litigation, regulatory matters, securities (including compliance with securities law requirements), real estate, legislative, employment and benefits, tax, and intellectual property matters. It includes oversight of maintenance of corporate records (policies, procedures and management). It includes services required of a publicly held corporation, including shareholder, board of director and related committee meetings, consents, resolutions, minutes, and records.

Allocation Factors: (1) General/Corporate.

11. Supply Chain

“Supply Chain” means the acquisition and provision of goods and services other than fuel, energy commodities or energy transmission. It includes supplier diversity. Specific activities include material inventory management, contract administration services, warehousing and logistics services and the establishment of inventory standards. It further includes the purchase, oversight, and maintenance of vehicles and related equipment.

Allocation Factors: (1) Total Non-Labor Spend without Fuel and Supply; (2) Number of Fleet Assets; (3) Number of Transactions; (4) Composite Allocator.

II. Services that WBS May Provide to Any Regulated Party

Subject to the limitations set forth in Section II.1 and applicable state and federal requirements, WBS may provide to any Regulated Party the Services described in this Appendix C, Section II.

1. Operational Support and Development

“Operational Support and Development” means support to utility distribution operations [and interstate storage operations](#). Such support includes designing and monitoring the construction and maintenance of distribution [and transmission](#) lines [and storage fields](#) and ensuring that construction activity is consistent with plans. It includes coordinating the planning and operation of distribution, [transmission and storage](#) systems, performing operational reviews of completed construction, maintenance work of distribution [and transmission](#) lines, [operating storage fields](#), and operating meter shops. It includes geospatial services, locate system support, damage prevention, and contract administration to all regulated gas and electric

affiliates. It includes providing services and training to operate and support gas and electric utility [and natural gas storage](#) operations, such as construction, design, operation and maintenance; and field services. It further includes developing and implementing initiatives to enhance efficiencies and operational compliance, technical training, and project management.

Allocation Factors: (1) Feet of Installed/Replaced Pipeline; (2) Number of Meters Repaired; (3) FTE Work Estimate; (4) Number of Employees; (5) Project Specific Allocator; (6) MW; [\(7\) Gas Throughput](#); [\(8\) Storage Capacity](#).

2. Wholesale Energy and Fuels

“Wholesale Energy and Fuels” means administrative functions related to purchasing, marketing and selling natural gas and other energy commodities (including hedging and other risk management tools); scheduling, dispatching, interrupting, and curtailing deliveries; acquiring, selling, releasing and managing capacity; control operations (including compliance with applicable state and federal operating requirements); and operating [utilitycompany](#)-owned underground natural gas storage fields. This function excludes all functions that are not ministerial in nature and excludes contract ownership, as each Party will continue to hold supply and capacity contracts in its own name.

Allocation Factors: (1) Gas Throughput; (2) Peak Day Capacity; (3) MW; (4) FTE Work Estimate; [\(5\) Storage Capacity](#).

Allocation Factors for Services that WBS May Provide

WBS will allocate costs through a tiered approach. This allocation methodology reflects operational aspects of the charge and applies costs in a meaningful and impartial manner.

First, costs will be directly charged whenever appropriate and practicable. Direct charging is essentially a 100% allocation of costs related to a particular Service to the Party receiving that Service.

Second, where direct charging is not appropriate and practicable, costs will be allocated using cost causation principles that link costs related to a particular Service to the Party receiving that Service.

All other cost allocations will be broad-based with a generalized cost basis proxy.

Specific Allocation Factors

Application Allocator – Based on the allocation of the specific application being worked on. The numerator of which is for a Party and the denominator of which is for all Parties or specific Parties receiving the Service allocated per this factor, if not all Parties are receiving the Service. This ratio will be determined annually or more frequently if required due to a significant change in circumstances.

Call Volume – Based on average call volume during the most recent 12 months for which data are available or for a forecast 12-month period at the time the budget is

prepared. The numerator of which is for a Party and the denominator of which is for all Parties or specific Parties receiving the Service allocated per this factor, if not all Parties are receiving the Service. This ratio will be determined annually or more frequently if required due to a significant change in circumstances.

Composite Allocator Based on Total Historical Billings for a WBS functional service as defined in Appendix C - Based on the total O&M billings for the most recent 12 months for which data are available or for a forecast 12-month period at the time the budget is prepared or total O&M billings for the previous calendar year. The numerator of which is for a Party and the denominator of which is for all Parties or specific Parties receiving the Service allocated per this factor, if not all Parties are receiving the Service. This ratio will be determined annually or more frequently if required due to a significant change in circumstances.

CPU and Disk Storage – Based on the number of CPU cycles used by the application divided by the total number of used CPU cycles and the total bytes of data storage used by the application divided by the total bytes used for data storage for the most recent 12 months for which data are available or for a forecast 12-month period at the time the budget is prepared. The numerator of which is for a Party and the denominator of which is for all Parties or specific Parties receiving the Service allocated per this factor, if not all Parties are receiving the Service. This ratio will be determined annually or more frequently if required due to a significant change in circumstances.

Dollars Associated with Number of Imprints – Based on the dollars associated with the number of imprints for the most recent 12 months for which data are available or for a forecast 12-month period at the time the budget is prepared. The numerator of which is for a Party and the denominator of which is for all Parties or specific Parties receiving the Service allocated per this factor, if not all Parties are receiving the Service. This ratio will be determined annually or more frequently if required due to a significant change in circumstances.

Feet of Installed/Replaced Pipeline – Based on average number of feet installed/replaced for the most recent 12 months for which data are available or for a forecast 12-month period at the time the budget is prepared. The numerator of which is for a Party and the denominator of which is for all Parties or specific Parties receiving the Service allocated per this factor, if not all Parties are receiving the Service. This ratio will be determined annually or more frequently if required due to a significant change in circumstances.

Full Time Equivalent (FTE) Work Estimate – Based on a recurring, predictable level of service. The numerator of which is for a Party and the denominator of which is for all Parties or specific Parties receiving the Service allocated per this factor, if not all Parties are receiving the Service. This ratio will be determined annually or more frequently if required due to a significant change in circumstances.

Gas Throughput – Based on gas throughput in dekatherms (sales or transportation or both) for the most recent 12 months for which data are available or for a forecast 12-month period at the time the budget is prepared. The numerator of which is for a Party

and the denominator of which is for all Parties or specific Parties receiving the Service allocated per this factor, if not all Parties are receiving the Service. This ratio will be determined annually or more frequently if required due to a significant change in circumstances.

General/Corporate – Based on an equal weighting of a 13-month average of assets (excluding hedge assets, goodwill, and non-ordinary assets) for the most recent 13 months at the time the budget is prepared and average annual O&M costs (excluding fuel costs) for the most recent 12 months at the time the budget is prepared. The numerator of which is for a Party and the denominator of which is for all Parties or specific Parties receiving the Service allocated per this factor, if not all Parties are receiving the Service. This ratio will be determined annually or more frequently if required due to a significant change in circumstances.

Megawatts (MW) – Based on the percentage rated generation capacity in megawatts (MW), the numerator of which is for all Parties or specific Parties receiving the Service allocated per this factor, if not all Parties are receiving the Service. This ratio will be revised annually at budget time if there are additions or deletions of generating units, or changes in ownership percentages of existing units. Generating capacity may be inclusive of all generation types or specific such as hydro or coal. The MW allocator may also be used to allow for accounting to the plant level.

Number of Customers – Based on the average number of customers over the most recent 12 months for which data are available or for a forecast 12-month period at the time the budget is prepared. The numerator of which is for a Party and the denominator of which is for all Parties or specific Parties receiving the service allocated per this factor, if not all Parties are receiving the service. This ratio will be determined annually or more frequently if required due to a significant change in circumstances. Customers may be all customers or a relevant subset of customers, including electric, gas, sales or transportation.

Number of Devices – Based on the number of devices or a forecast at the time the budget is prepared. The numerator of which is for a Party and the denominator of which is for all Parties or specific Parties receiving the service allocated per this factor, if not all Parties are receiving the service. This ratio will be determined annually or more frequently if required due to a significant change in circumstances. Devices may include counts of personal computers, mobile computing devices, pagers, or radios.

Number of Employees - Based on the average number of employees included in the budget that is being prepared. The numerator of which is for a Party and the denominator of which is for all Parties or specific Parties receiving the service allocated per this factor, if not all Parties are receiving the service. This ratio will be determined annually or more frequently if required due to a significant change in circumstances. Employees may be all employees or a relevant subset of employees, including employees at a specific location(s), union, or non-union.

Number of Fleet Assets – Based on the average number of fleet assets during the most recent 12 months for which data are available or for a forecast 12-month period at the

time the budget is prepared. The numerator of which is for a Party and the denominator of which is for all Parties or specific Parties receiving the service allocated per this factor, if not all Parties are receiving the service. This ratio will be determined annually or more frequently if required due to a significant change in circumstances.

Number of Meters – Based on the average number of meters (electric and/or gas) in place during the most recent 12 months for which data are available or for a forecast 12-month period at the time the budget is prepared. The numerator of which is for a Party and the denominator of which is for all Parties or specific Parties receiving the service allocated per this factor, if not all Parties are receiving the service. This ratio will be determined annually or more frequently if required due to a significant change in circumstances.

Number of Meters Repaired – Based on the average number of meters repaired for the most recent 12 months for which data are available or for a forecast 12-month period at the time the budget is prepared. The numerator of which is for a Party and the denominator of which is for all Parties or specific Parties receiving the service allocated per this factor, if not all Parties are receiving the service. This ratio will be determined annually or more frequently if required due to a significant change in circumstances.

Number of Transactions – Based on the average number of transactions processed in the system during the most recent 12 months for which data are available or for a forecast 12-month period at the time the budget is prepared. The numerator of which is for a Party and the denominator of which is for all Parties or specific Parties receiving the service allocated per this factor, if not all Parties are receiving the service. This ratio will be determined annually or more frequently if required due to a significant change in circumstances. Transactions may include inventory, invoices processed, or office moves.

Peak Day Capacity (gas) – Based on the highest daily send out in therms (excluding transportation) for the most recent 12 months for which data are available or for a forecast 12-month period at the time the budget is prepared. The numerator of which is for a Party and the denominator of which is for all Parties or specific Parties receiving the service allocated per this factor, if not all Parties are receiving the service. This ratio will be determined annually or more frequently if required due to a significant change in circumstances.

Square Footage – Based on average square footage occupied for the most recent 12 months for which data are available or for a forecast 12-month period at the time the budget is prepared. The numerator of which is for a Party and the denominator of which is for all Parties or specific Parties receiving the service allocated per this factor, if not all Parties are receiving the service. This ratio will be determined annually or more frequently if required due to a significant change in circumstances.

[Storage Capacity - Based on storage capacity factors during the most recent 12 months for which data are available or for a forecast 12-month period at the time the budget is prepared. The numerator of which is for a Party and the denominator of which is for all Parties or specific Parties receiving the service allocated per this factor, if not all Parties](#)

are receiving the service. This ratio will be determined annually or more frequently if required due to a significant change in circumstances. Storage capacity factors may include total capacity (working gas and base gas) of a company-owned storage field or field(s), working gas or base gas of a company-owned storage field or field(s), and a Party's storage rights (including annual, season, or daily rights) to use capacity at a company-owned field(s).

Total Non-Labor Spend without Fuel and Supply – Based on the average non-labor spend excluding fuel and supply during the most recent 12 months for which data are available or for a forecast 12-month period at the time the budget is prepared. The numerator of which is for a Party and the denominator of which is for all Parties or specific Parties receiving the service allocated per this factor, if not all Parties are receiving the service. This ratio will be determined annually or more frequently if required due to a significant change in circumstances.

Total Property, Plant and Equipment – Based on average property, plant and equipment balances during the most recent 12 months for which data are available or for a forecast 12-month period at the time the budget is prepared. The numerator of which is for a Party and the denominator of which is for all Parties or specific Parties receiving the service allocated per this factor, if not all Parties are receiving the service. This ratio will be determined annually or more frequently if required due to a significant change in circumstances.

Appendix D

Services That Any Party (Except WBS, North Shore Gas Company and The Peoples Gas Light and Coke Company) May Provide to Any Party (Except North Shore Gas Company and The Peoples Gas Light and Coke Company)

Subject to the limitations set forth in Section II.1 and applicable state and federal requirements, a Party may provide to or receive from any other Party the Services described in this Appendix D, provided that, WBS, North Shore Gas Company and The Peoples Gas Light and Coke Company may not be a Providing Party under this Appendix D and North Shore Gas Company and The Peoples Gas Light and Coke Company may not be a Receiving Party under this Appendix D¹.

“Major Services” shall mean Services identified as such in this Appendix D and for which Parties expect that, in the normal course of business and under normal operating conditions, they shall provide on a regular or day-to-day basis. “Incidental Services” shall mean Services identified as such in this Appendix D and for which the Parties expect that, in the normal course of business and under normal operating conditions, they shall provide infrequently or, if provided on a regular or day-to-day basis, shall not be within a fiscal year more than 10% of the dollar amount of the total operating and maintenance expense of either Party from the prior fiscal year.

I. Any Regulated Party may provide to or receive from any other Regulated Party the following Major Services:

1. **Administrative and Maintenance:** Provide administrative and other support that is incidental to an individual employee’s normal job duties such as clerical support, reporting assistance, and regulatory support such as data responses; provide building management and maintenance support at company-owned or leased premises; provide information technology support in a limited capacity (e.g., two-way radio support).
2. **Customer:** Provide customer service; support billing and payment processing; support credit and collections activity; energy conservation support; marketing and sales work; claims management.
3. **Fleet:** Maintain vehicles; transport materials and supplies.
4. **Operational Support - Electric Utility:** Provide services and training to operate and support electric utility operations, such as compliance with independent system operator requirements; engineering, construction, design, operation and maintenance; contract management, including marketing and procurement;

¹ WBS provides Services to all Parties under Appendix C. North Shore Gas Company and The Peoples Gas Light and Coke Company each provides and receives Services from Parties other than WBS under Appendix E.

electric capacity, energy and transmission services; FERC, NERC and other regulatory compliance; field services; system planning, analysis and projections.

5. **Operational Support - Gas Utility and Gas Storage Service Provider:** Provide services and training to operate and support gas utility and storage field operations, such as construction, design, operation and maintenance; field services; operational compliance.
5. **Project Assistance (IT):** Provide support for information technology projects, including those that will be capitalized as an asset of WBS.
6. **Union Employees:** Provide services by employees, who are members of a labor union and not employed by WBS, for all or part of any services that WBS would otherwise provide, and the services may include, by way of example and not limitation, IT, Accounting, Finance, Payroll, Supply Chain, and Administrative services.
7. **Warehousing:** Provide materials and supplies, including storage, ordering, and inventory management.

II. Any Non-Regulated Party may provide to or receive from any Regulated Party the following Services:

Major Services

1. **Administrative and Maintenance:** Provide administrative and other support that is incidental to an individual employee's normal job duties such as clerical support, reporting assistance, and regulatory support such as data responses; provide building management and maintenance support at company-owned or leased premises; provide information technology support in a limited capacity (e.g., two-way radio support).
2. **Project Assistance (IT):** Provide support for information technology projects, including those that will be capitalized as an asset of WBS.
3. **Union Employees:** Provide services by employees, who are members of a labor union and not employed by WBS, for all or part of any services that WBS would otherwise provide, and the services may include, by way of example and not limitation, IT, Accounting, Finance, Payroll, Supply Chain, and Administrative services.

Incidental Services

1. **Customer:** Provide customer service; support billing and payment processing; support credit and collections activity; claims management.
2. **Fleet:** Maintain vehicles; transport materials and supplies.
3. **Operational Support:** Provide services and training to operate and support energy operations.

4. **Warehousing:** Provide materials and supplies, including storage, ordering, and inventory management.

III. In addition to providing and billing for the Services described in this Appendix D and in Section II.1, any Party may allocate costs to any other Party as follows:

1. **Cost Allocations:** Payment of an invoice or refunds of credits by one or more Parties for goods or services for which another Party or other Parties benefitted; charges for systems owned by one Party and used by one or more other Parties; financing charges, such as those arising from intercompany loans (provided, however, that no Party will charge costs to Wisconsin Public Service Corporation, Wisconsin Electric Power Company or Wisconsin Gas Company LLC for intercompany loans); fees for credit lines available to more than one Party; transfers of renewable energy credits or other items of value; use of any airplane owned by WEC Energy; use of housing owned or rented by WEC Energy; benefit plans; transfer of benefits, such as vacation time when an employee transfers employment; and shared personnel, including management, regulatory, corporate directors and officers and their support personnel. The term “management” includes a Party’s chief executive officer, president or comparable officer, all persons who directly report to that officer, and all persons who report to those direct reports.
2. **Transition:** When an employee moves from a position with one Party to a position with another Party, provide services, for a transition period, appropriate to assist the person(s) assuming responsibility for tasks formerly performed by the employee in his former position.
3. **Short Term Assignments:** When an employee assumes responsibilities, on a short-term (less than two years) basis, with another Party (subject to any otherwise applicable restrictions such as affiliated interest requirements) but does not become an employee of the other Party, provide services required by the new position and allocate costs appropriately.

IV. Any Non-Regulated Party may provide to or receive from any other Non-Regulated Party any Service.

Appendix E

RIDER APPLICABLE TO NORTH SHORE GAS COMPANY AND THE PEOPLES GAS LIGHT AND COKE COMPANY

The Affiliated Interest Agreement approved by the Illinois Commerce Commission in Docket No. 16-_____ shall be subject to the following restrictions.

Subject to the limitations set forth in Section II.1 and applicable state and federal requirements, North Shore Gas Company ("North Shore") and The Peoples Gas Light and Coke Company ("Peoples Gas") (collectively, "NSG/PGL") may only provide to or receive from any other Party the Services as limited in this Rider.

1. "Major Services" shall mean Services identified as such in this Rider and for which Parties expect that, in the normal course of business and under normal operating conditions, they shall provide on a regular or day-to-day basis. "Incidental Services" shall mean Services identified as such in this Rider and for which the Parties expect that, in the normal course of business and under normal operating conditions, they shall provide infrequently or, if provided on a regular or day-to-day basis, shall not be within a fiscal year more than 10% of the dollar amount of the total operating and maintenance expense of either Party from the prior fiscal year.

2. "Non-Utility Affiliate" means the entities listed in Section E.V.

3. If NSG/PGL wish to revise Section E.I to add or delete services, NSG/PGL will file a Notice in Docket Nos. 12-0273/13-0612 (cons.) and also simultaneously provide a copy of the Notice to the Commission Staff's Manager of Accounting and Manager of the Policy Program.

If no objections or recommendations concerning the change to the list of authorized services is filed, the addition or deletion of the service will take effect 35 days after the filing date.

If an objection or recommendation is filed, the Commission shall initiate a proceeding under Section 7-101 of the Public Utilities Act ("Act") and the change in services shall not automatically become effective.

If NSG/PGL wish to revise the previously proposed change to the list of authorized services, a new Notice must be filed.

Nothing in this paragraph 3 prevents NSG/PGL from filing a Petition under Section 7-101 of the Act for review and approval under the process and within the timeframe that normally apply to such filings. Notwithstanding the foregoing, for good cause shown, if

NSG/PGL determine that either of them has provided to a Regulated Party or received from a Regulated Party a service not defined in Section E.I, NSG/PGL will promptly file a Notice in Docket Nos. 12-0273/13-0612 (cons.) and also simultaneously provide a copy of the Notice to the Commission Staff's Manager of Accounting and Manager of the Policy Program; such a filing after the service is provided or received will not be deemed a violation of the Act.

I. The Parties may provide to or receive from any Regulated Party the Services set forth below which are limited to the specific terms delineated below.

Major Services

1. **Administrative and Maintenance:** Provide administrative and other support that is incidental to an individual employee's normal job duties such as clerical support, reporting assistance, and regulatory support such as data responses; provide building management and maintenance support at company-owned or leased premises; and provide information technology support in a limited capacity (e.g., two-way radio support).
 - "Provide administrative and other support that is incidental to an individual employee's normal job duties" means that the person providing this service is assisting the person(s) primarily responsible for the task.
 - "clerical support" means typing; word processing; creating spreadsheets; working with various computer programs (e.g., Microsoft applications like PowerPoint, Visio, Excel); duplicating, including basic maintenance of duplication equipment (e.g., ordering and replacing paper and toner); mailing in whatever form (electronic mail, overnight courier, registered mail, arranging for personal delivery, electronic filing, etc.); and scheduling meetings or travel.
 - "reporting assistance" means helping prepare reports such as required regulatory submissions to governmental bodies like the SEC, FERC, NERC, EPA, IRS, public service commissions; and helping prepare reports to meet corporate requirements, such as Board of Director or senior management reports.
 - "regulatory support such as data responses" means helping respond to data requests or other information requests from governmental bodies or third parties in regulatory matters; helping prepare testimony; and helping prepare filings in regulatory proceedings.
 - "provide building management and maintenance support at company-owned or leased premises" means receptionist services; scheduling visitors and providing access, including applicable security requirements (e.g., maintenance of a log or identification requirements); and arranging for, scheduling or providing maintenance such as cleaning or repair at a company-owned or leased premises.

- “provide information technology support in a limited capacity (e.g., two-way radio support)” means assisting with a function that Information Technology would typically support and two-way radio support.
2. **Customer:** Provide customer service; support billing and payment processing; support credit and collections activity; energy conservation support; marketing and sales work; claims management.
- “Provide customer service” means services associated with handling all functions directly related to a customer being on the utility system, but not field services, such as handling and processing applications for service; handling credit-related requirements; initiating service upon completion of the application process, reconnecting service and disconnecting service (inputting the appropriate information in customer information systems and sending notices, not the field service of physically initiating, reconnecting or disconnecting service); answering customer inquiries; answering customer calls related to emergencies; handling payment arrangements; handling matters related to payment assistance programs; and responding to third party inquiries related to customer matters (e.g., public service commission complaints).
 - “support billing and payment processing” means services needed to prepare and issue bills; receive and process payments, including inputting data in customer information systems, and depositing payments in financial institutions.
 - “support credit and collections activity” means services needed to implement credit requirements (such as credit reviews to determine if a deposit is required to initiate service or restore service); credit reporting requirements; returning deposits; and collection of past due amounts, including sending notices to customers and inputting the appropriate information in customer information systems to support credit and collection activity and service discontinuance.
 - “energy conservation support” means supporting (directly or indirectly through support to contractors) the implementation of utility energy efficiency, demand response, energy conservation and similar programs; review and process applications; process incentive delivery; answer customer inquiries; answer third party inquiries (e.g., vendors, public service commissions); develop programs; maintain data about program implementation; and analyze programs.
 - “marketing and sales work” means communicating with current and prospective customers about available services; assisting customers apply for services; assisting customers with questions or concerns related to services the customer is taking; and assisting customers to discontinue services.

- “claims management” means handling matters related to customers or third parties bringing a claim against a Party or claims by a Party against customers or third parties, including investigations, litigation support, and settlements.
3. **Operational Support - Electric Utility:** Provide services and training to operate and support electric utility operations, such as compliance with independent system operator requirements; engineering, construction, design, operation and maintenance; contract management, including marketing and procurement; electric capacity, energy and transmission services; FERC, NERC and other regulatory compliance; field services; system planning, analysis and projections.
- “Provide services and training to operate and support electric utility operations” means services that an electric utility needs and training that employees need to operate and the list following this phrase identifies the categories of such services covered by this Agreement. Electric utility operations include coal-fired and gas fired facilities, hydroelectric plants, and intermittent resources such as wind and solar generation as well as the transmission and distribution systems to transmit the energy.
 - “compliance with independent system operator requirements” means the actions an electric utility must take to comply with requirements imposed by the independent system operator (ISO) in which it is a member. The ISO requirements are imposed by the ISO’s tariffs; by the ISO’s contract(s) with the electric utility; by the ISO’s business practice manuals; by the Federal Energy Regulatory Commission; by the national reliability organization; by the regional reliability organization. These actions are any step to meet an ISO requirement; reviewing requirements imposed by the foregoing; developing processes for compliance with the foregoing; participating in meetings about the foregoing; participating in meetings, hearings, conferences and the like with regulatory bodies and reliability organizations; preparing for and participating in internal and external audits associated with ISO requirements; preparing and maintaining documentation for internal recordkeeping; preparing and maintaining documentation for submission to or filing with a regulatory body or reliability organization; developing computer systems to comply with ISO requirements; developing and maintaining data retention policies to meet ISO requirements.
 - “engineering, construction, design, operation and maintenance” means services needed to develop, maintain and operate electric utility infrastructure. These services include any service that an engineer would perform associated with the operation of an electric utility’s capital assets such as generation, transmission and distribution facilities. It includes building (constructing) the assets; engineering oversight of building (construction). It includes designing the assets (engineering sketches, drafts, blue prints, specifications, selecting manufacturers and parts to acquire to construct the asset, selecting and contracting with contractors). It includes operating the assets, *i.e.*, the day-to-day tasks

associated with generating electricity (acquiring fuel, meeting regulatory and ISO requirements to schedule the use of the assets, running the generation facility); day-to-day tasks associated with running the distribution system and delivering energy to retail and wholesale customers consistent with applicable legal and physical requirements. It includes maintaining the assets (scheduled maintenance activities such as those recommended by the manufacturers of parts, those required by prudent utility practice or prudent industry practice, those required by regulatory authorities or reliability organizations; unscheduled maintenance such as activities required by damage to the assets by third parties, force majeure events or other persons or forces; repairs to the assets).

- “contract management, including marketing and procurement” means services associated with contracts (purchase and sale) related to operating an electric utility. Such services include requesting proposals, negotiating and entering into contracts to support the other functions identified for this service (e.g., contracts associated with compliance such as hiring consultants or contractors); services associated with the engineering, construction, design, operation and maintenance of the utility system; purchasing fuel (coal or gas) to generate energy; selling the output of the generation facilities, including sales and marketing activities such as responding to requests for proposal, meeting with current and prospective customers; implementing contract provisions such as giving required notices, complying with any credit requirements, complying with any insurance requirements, *etc.* (this list does not purport to list every contract management function as functions are dependent on the terms and conditions of the contract); retaining the contract for the applicable retention period; filing the agreement or any reports, if required, with regulatory bodies.
- “electric capacity, energy and transmission services” means running the electric utility system as it pertains to managing the particular services associated with capacity, energy and transmission. This means meeting ISO requirements and for WEC Energy’s electric utilities, requirements imposed by the American Transmission Company, LLC (ATC) or any successor, which owns and operates the transmission assets formerly owned by WEC Energy’s electric utilities.
- “FERC, NERC and other regulatory compliance” means meeting all electric utility operating requirements imposed by the Federal Energy Regulatory Commission (FERC); by the national reliability organization (NERC); by the regional reliability organization (e.g., MRO, Reliability First), the Public Service Commission of Wisconsin, the Michigan Public Service Commission, state and federal environmental agencies, and any other regulatory agency with jurisdiction over the electric utility operations of WEC Energy’s state-regulated electric utilities.
- “field services” means day-to-day operation of the electric utility system by personnel operating in the field, such as maintaining, operating, replacing and repairing lines, poles, transformers, and other assets. This service includes disconnecting or restoring energy service, tree trimming, and any other

mandated activity, performed in the field, to maintain the safe and reliable operation of the electric utility system.

- “system planning, analysis and projections” means planning to meet requirements (*i.e.*, load), including forecasting load, and the effect on generation, transmission and distribution (*e.g.*, is more or less needed and how should this be accomplished such as through the state process or the Midcontinent ISO process or ATC). It includes owned and contracted assets, determining whether to meet load through contracts or existing or new assets, and whether those assets may be owned or built by an WEC Energy entity or another entity. It includes participating in planning by the ISO and ATC and participating in state and federal regulatory proceedings. This service includes forecasting requirements (*i.e.*, load).

4. **Operational Support - Gas Utility and Gas Storage Service Provider:**

Provide services and training to operate and support gas utility and storage field operations, such as construction, design, operation and maintenance; field services; operational compliance.

- “Provide services and training to operate and support gas utility and storage field operations” means services that a gas utility or storage service provider needs and training that employees need to operate and the list following this phrase identifies the categories of such services covered by this Agreement.
- “construction, design, operation and maintenance” means services needed to develop, maintain and operate gas utility and storage field infrastructure. These services include any service associated with the operation of a gas utility’s or storage service provider’s capital assets such as storage, LNG, LP, transmission and distribution facilities and appurtenant facilities such as gate stations or interconnection facilities. It includes building (constructing) the assets and engineering oversight of building (construction). It includes designing the assets (engineering sketches, drafts, blue prints, specifications, selecting manufacturers and parts to acquire to construct the asset, selecting and contracting with contractors). It includes operating the assets, *i.e.*, the day-to-day tasks associated with running the transmission and distribution system, storage field, LNG or LP plant and delivering gas to retail and, if applicable, wholesale customers consistent with applicable legal and physical requirements. It includes maintaining the assets (scheduled maintenance activities such as those recommended by the manufacturers of parts, those required by regulatory authorities; unscheduled maintenance such as activities required by damage to the assets by third parties, *force majeure* events or other persons or forces; repairs to the assets).
- “field services” means day-to-day operation of the gas utility or storage service provider’s system by personnel operating in the field, such as maintaining, operating, replacing, and repairing pipes, meters, regulators, valves, fittings, tanks, and other equipment appurtenant to those facilities.

This service includes disconnecting or restoring service and any other mandated activity performed in the field, to maintain the safe and reliable operation of the gas utility [or storage](#) system.

- “operational compliance” means, to the extent not covered by other Services, establishment and administration of policies to support compliance with applicable state and federal requirements applicable to gas facilities.
5. **Project Assistance (IT):** Provide support for information technology projects, including those that will be capitalized as an asset of WBS.
- “Provide support for information technology projects, including those that will be capitalized as an asset of WBS” means assisting with IT projects such as answering questions from IT and other WBS personnel modifying an existing information system or developing a new information system; providing data to such personnel; testing the modified or new system before and after implementation. “Information systems” include development of application and enterprise software, such as customer information systems or work management systems.
6. **Union employees** – Provide services by employees, who are members of a labor union and not employed by WBS, for all or part of any services that WBS would otherwise provide, and the services may include, by way of example and not limitation, IT, Accounting, Finance, Payroll, Supply Chain, and Administrative services.
7. **Warehousing:** Provide materials and supplies, including storage, ordering, and inventory management.
- “Provide materials and supplies” means managing tangible goods (e.g., pipes, meters, poles, regulators, valves, fittings, transformers, office supplies, office equipment, vehicles, parts needed to repair assets) that the utility [or storage service provider](#) procures to support its business.
 - “storage” means storing (stocking) tangible goods in an appropriate manner, *i.e.*, in a manner that protects the goods from damage or deterioration, and, if applicable, in accordance with applicable manufacturers’ guidelines or legal requirements.
 - “ordering” means requisitioning and procuring tangible goods associated with the utility’s [or storage service provider’s](#) business.
 - “inventory management” means tracking or cataloging tangible goods; determining when to order more of such goods; determining whether and when to dispose of such goods; and preparing such goods for movement or transport to another site.

Incidental Services

1. **Fleet:** Maintain vehicles; transport materials and supplies.

- “Maintain vehicles” means keeping vehicles in good repair and working order. “Vehicles” include all vehicles owned or used by the utility or storage service provider, including cars, trucks, vans, backhoes, and such.
- “transport materials and supplies” means moving tangible goods from one site to another.

II. Services between NSG/PGL and Non-Regulated Parties

A. NSG/PGL may provide to WEC Business Services LLC and provide to and receive from WEC Energy Group, Inc., the following Incidental Services:

1. **Administrative and Maintenance:** Provide administrative and other support that is incidental to an individual employee’s normal job duties such as clerical support, reporting assistance, and regulatory support such as data responses; provide building management and maintenance support at company-owned or leased premises; provide information technology support in a limited capacity (e.g., two-way radio support).
2. **Customer:** Provide customer service; support billing and payment processing; support credit and collections activity; claims management.
3. **Fleet:** Maintain vehicles; transport materials and supplies.
4. **Operational Support:** Provide services to operate and support energy operations.
5. **Project Assistance (IT):** Provide support for information technology projects, including those that will be capitalized as an asset of WBS.
6. **Union employees** – Provide services by employees, who are members of a labor union and not employed by WBS, for all or part of any services that WBS would otherwise provide, and the services may include, by way of example and not limitation, IT, Accounting, Finance, Payroll, Supply Chain, and Administrative services.
7. **Warehousing:** Provide materials and supplies, including storage, ordering, and inventory management.

B. NSG/PGL may only provide to or receive from any Non-Regulated Party that is not a Non-Utility Affiliate only the following Incidental Services under this Rider.

1. **Administrative:**

- “Reporting assistance,” which means helping prepare reports such as required regulatory submissions to governmental bodies like the SEC, FERC,

NERC, EPA, IRS, public service commissions; and helping prepare reports to meet corporate requirements, such as Board of Director or senior management reports.

- “Regulatory support,” which means helping respond to data requests or other information requests from governmental bodies or third parties in regulatory matters; helping prepare testimony; and helping prepare filings in regulatory proceedings.
- “Provide information technology support in a limited capacity,” which means assisting with a function that Information Technology would typically support.

2. Operational Support:

- “Operate and maintain CNG facilities,” which means the day-to-day operation and maintenance of Peoples Gas’ compressed natural gas fueling station located at its Division Street shop.

III.

A. In addition to providing and billing for the Services described above and in Section II.1, any Party may allocate costs to NSG/PGL and NSG/PGL may allocate costs to any other Party, as follows:

- 1. Cost Allocations:** Payment of an invoice or refunds of credits by one or more Parties for goods or services for which another Party or other Parties benefitted; charges for systems owned by one Party and used by one or more other Parties; financing charges, such as those arising from intercompany loans (provided, however, that no Party will charge costs to Wisconsin Public Service Corporation, Wisconsin Electric Power Company or Wisconsin Gas Company LLC for intercompany loans); fees for credit lines available to more than one Party; transfers of renewable energy credits or other items of value; use of any airplane owned by WEC Energy; use of housing owned or rented by WEC Energy; benefit plans; transfer of benefits, such as vacation time when an employee transfers employment; and shared personnel, including management, regulatory, corporate directors and officers and their support personnel. The term “management” includes a Party’s chief executive officer, president or comparable officer, all persons who directly report to that officer, and all persons who report to those direct reports.
- 2. Transition:** When an employee moves from a position with one Party to a position with another Party, provide services, for a transition period, appropriate to assist the person(s) assuming responsibility for tasks formerly performed by the employee in his former position.
- 3. Short Term Assignments:** When an employee assumes responsibilities, on a short-term (less than two years) basis, with another Party (subject to any otherwise applicable restrictions such as affiliated interest requirements) but

does not become an employee of the other Party, provide services required by the new position and allocate costs appropriately.

B. Asset Transfers by NSG/PGL to WBS: On and after the effect date of this Rider, as ordered in Docket Nos. 12-0273/13-0612 (cons.) but including the asset transfers approved in Docket No. 14-0500, North Shore or Peoples Gas may transfer assets to WBS, provided that, for all land and any individual asset that has an original cost, before depreciation, greater than \$100,000, WBS will track such asset. If WBS decides to dispose of such land or asset, it will transfer the land or asset to the transferring utility (North Shore or Peoples Gas, as applicable) at net book value. Under no circumstances is WBS allowed to transfer such land or assets to a non-regulated affiliate.

IV. Any Non-Regulated Party may provide to or receive from any other Non-Regulated Party any Service.

V. For purposes of this Rider, the term “Non-Utility Affiliates” includes only the following:

- a) WBS
- b) WEC Energy

VI. Audit: The Audit ordered in Section V.5 shall also include the following:

- a) A listing of all transactions and a review of transactions that occurred under Section E.II.A of this Rider to ensure that the interactions were services listed under that section, that they were performed at the appropriate cost as outlined in Article III of this Agreement and they were indeed Incidental Services.
- b) A listing of all transactions and a review of transactions that occurred under Section E.II.B of this Rider to ensure that the interactions were services listed under that section, that they were performed at the appropriate cost as outlined in Article III of this Agreement and they were indeed Incidental Services.
- c) A listing of all transactions and a review of transactions that occurred under Section E.III of this Rider to ensure that the interactions were allowed under that section and were performed at the appropriate cost as outlined in Article III of this Agreement.